DOCUMENT RESUME

ED 186 117 PS 011 397

AUTHOR	Morgan, Griffith A. V.; And Others
TITLE	Children's Characteristics on School Entry: Junior Kindergarten, Senior Kindergarten and Grade 1.
INSTITUTION	Ontario Dept. of Education, Toronto.
PUB DATE	79
NOTE	435p.
AVAILABLE FROM	Ontario Institute for Studies in Education, Publications Sales, 252 Bloor Street West, Toronto, Ontario, Canada M5S 1V6 ($5.00)
EDRS PRICE	MF01/PC18 Plus Postage.
DESCRIPTORS	Classroom Observation Techniques; Cognitive Development; *Data Collection; *Family Characteristics; Foreign Countries; *Grade 1; *Kindergarten Children; Language Skills; Parent Attitudes; Parent School Relationship; Personality; Primary Education; *School Entrance Age; Socioeconomic Status; *Student Characteristics; Student Evaluation; Teacher Characteristics; Teaching Methods
IDENTIFIERS	Ontario

ABSTRACT

The purpose of this study was to obtain and analyze information on the characteristics of the child entering school for the first time in junior kindergarten, senior kindergarten and grade one. A sample of 209 children from different areas in Ontario, Canada, including rural, urban, inner city and metropolitan areas, was studied. Information was gathered by means of: (1) questionnaires mailed to parents, teachers and principals, (2) interviews with parents and teachers, (3) classroom observations of children in this program, and (4) direct testing and checking of children's developmental levels and educational attainment by teachers. Among the findings: (1) socio-economic status and educational levels of both parents were significantly related to children's educational progress; (2) the majority of the children were reported by parents as having developmental levels, on motor and social or self-helping skills, which are appropriate to 5-year-olds; (3) only a minority of the children attended day care or nursery classes. Children in day care were from a slightly lower socio-economic level than those who attended nursery schools; (4) teachers' ratings suggested that the majority of children entering junior or senior kindergarten are perceived as healthy, having reasonable attendance and settling easily into school; (5) teachers rated a majority of children as being in the top third of the class in ability, though the actual test scores showed that there was a normal distribution of ability in the sample; and (6) the preferred activities of children were in the gross motor, language and creative areas with much less emphasis on environmental study, science, or problem-solving. (Author/MP)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED186117

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

CHILDREN'S CHARACTERISTICS ON SCHOOL ENTRY

JUNIOR KINDERGARTEN, SENIOR KINDERGARTEN AND GRADE 1

GRIFFITH A.V. MORGAN, Principal Investigator
GRETA HOFSTRA
ELIZABETH BLACK
LINDA SKINNER

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY
Ministry of
Education, Ontario
TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

PS 011397

This research project was funded under contract
by the Ministry of Education, Ontario

This study reflects the views of the authors and not
necessarily those of the Ministry of Education

© The Ministry of Education, Ontario, 1979
Queen's Park
Toronto, Ontario

MINISTRY OF EDUCATION, CATALOGUING IN PUBLICATION DATA

Morgan, Griffith A.V.
Children's characteristics on school entry (junior kindergarten, senior kindergarten, and grade 1) / Griffith A.V. Morgan, principal investigator ; Greta Hofstra, Elizabeth Black, Linda Skinner. -
This research project was funded under contract by the Ministry of Education, Ontario.
It was carried out within the Centre for Educational Disabilities, University of Guelph.
1. Students, Ratings of. 2. Elementary school students' socio-economic status - Ontario. 3. Kindergarten. I. Ontario. Ministry of Education. II. University of Guelph. Centre for Educational Disabilities.

ON01659 372.127

Additional copies may be ordered from:

The Ontario Institute for Studies in Education
Publications Sales
252 Bloor Street West
Toronto, Ontario
M5S 1V6

or from:

The Ontario Government Bookstore
880 Bay Street
Toronto, Ontario
M7A 1L2

1 2 3 4 5 XX 38 28 18 08 97

ABSTRACT

To investigate the characteristics of children entering school for the first time, a sample of 209 children was studied (including 2 Grade one children). Five boards of education were selected to represent a variety of areas in Ontario, including rural, urban, inner city and metropolitan areas. A Francophone area was also included. The range of sampling was cut down by the refusal to co-operate at short notice of three boards of education, but the variety in the province was still retained.

Nine schools were randomly sampled from each board area, and three children randomly sampled in each school.

Where junior kindergartens had been established, children were sampled from these classes as well as from kindergarten classes in the same board. There were 21 junior kindergarten and 45 senior kindergarten classes and 3 family groupings.

Information was gathered from a variety of sources and instruments: parents, principals and teachers as well as by direct observation by the research team. Parents were sent a questionnaire to be returned by mail, and two-thirds were interviewed on a more detailed questionnaire in their own homes.

Teachers completed an extensive questionnaire covering: qualifications and experience; organization of school and class; equipment; educational objectives, educational viewpoints and preferred styles of management and discipline. They also estimated the expected level of response of children to various activities in the program.

Teachers also rated children on general ability and progress, on social and self-help skills, on language level and on temperament. They administered a test battery consisting of brief samples of language (receptive and expressive), math, spelling, reading/copying, fine and

gross motor skills, naming colours and drawing geometric shapes. The score distribution on the total test distributed children over a very wide range, and discriminated effectively between them.

Parents had socio-economic status ranging from unskilled occupations to professional/executive level, with a bias to the lower end of the scale.

They similarly covered the complete range of educational level from Grade 8 to university. Mothers were rather younger than fathers.

Over 70 percent of parents lived in their own house; few children had to share their room with more than one other child. The family was typically a nuclear family with two parents and just over two children, with no grandparents or relatives in residence. The majority of parents had been born in Canada.

Families were drawn from a variety of areas: isolated rural, rural, town and city; they were from a range of neighbourhoods of differing social level.

Parents appeared,at the child's first entry to school, to be satisfied with arrangements for meeting teachers. The majority expressed positive attitudes toward school and an interest in following the child's progress. They were reserved about the nature of the reports on school progress they had already received. A majority indicated readiness to become volunteers in the classroom.

There was a wide range of educational/cultural stimulation for children through trips and visits to centres of interest. The majority of families bought weekly or daily papers and claimed interest in reading. The range and content of reading material was, however, limited.

The socio-economic status and educational level of parents, especially the mother, was very poorly related to the test scores of children at the junior kindergarten level. There were significant relationships at the senior kindergarten level. The most consistent and significant relationships with children's test scores were with father's socio-economic levels and mother's educational level, or the interaction between these two factors. Removal of the effect of mother's socio-economic level and education made the relationships of father's status with children's test scores insignificant; removal of the effect of father's socio-economic status made the relationships of mother's socio-economic status and education with children's test scores non-significant. It was concluded that in general, the socio-economic status and educational level of both parents were important.

Socio-economic and education factors were associated with: time spent with the child; reading to the child; buying magazines specially for the child,but negatively with the amount of television viewed by the child in the evening.

Factors of parental interest such as the above were not associated with one another, except through socio-economic status of parents. They were specific and independent, and had disappointingly low relationships with measures of children's progress or test scores.

Parental socio-economic status and educational level were not associated significantly with parental interest in school and visiting school.

Parents stated as educational priorities: (1) basic educational skills; (2) moral education; (3) self-help and social skills. There was a low priority for environmental studies/science; only a small minority of parents attached importance to teaching a second language at kindergarten level.

Only a minority of children had attended day care or nursery classes. Children in day care were from a slightly lower socio-economic level than those who attended nursery schools. Nursery schools had more generous child/teacher ratios than day care centres.

The kindergarten program was rated more positively than the day care or nursery school programs.

Principals' views indicated that the majority of schools in the sample contained traditional closed classrooms, and only a small minority had "open concept" classes in architecture or teaching approach.

Teaching staff were reported to participate in decisions affecting purchase and use of materials and in planning program. Positive views were expressed about parental involvement in school and possible contribution as volunteers. This contrasted with the actual use of volunteers, and the perceptions of parents about their relationship and contribution to their school.

Parent-teacherassociations were believed to be of value, but only a minority of parents was perceived by the school as consistently attending meetings. In general, the initiative for parent-teacher relationship remained with the school.

Some questions were raised by the teachers' report that procedures for giving information to the teacher of the next stage, and in ensuring continuity between grades under study,depended almost entirely on informal contacts and meetings.

Teachers had long experience in teaching kindergarten. On the whole,senior kindergarten teachers had significantly more experience than junior kindergarten teachers. Almost none had training or experience in preschool education; few had experience in special education, but a number had experience in other stages of primary education. Very few had any administrative experience or had held consulting positions.

Teachers perceived the majority of children as settling easily into school. They expected only a small minority to have special needs or to need to repeat the first year in school; however, their ratings of the actual sample of children in the study indicated a very much higher proportion; 10 to 6 percent, of children likely to have special needs. Teachers rated a majority of children as being in the top third of the class in ability, though the actual test scores showed that there was a normal distribution of ability in the sample. Social and self-help skills in children were rated high.

Teachers were asked to rate children on language level; this scale distributed children over the full range of language skill; the ratings correlated highly with teachers' ratings of ability and with the test scores of kindergarten children; relationships were lower for junior kindergarten children.

Teachers' and parents' ratings of children's temperament agreed rather weakly and inconsistently, with the exception of scales such as "persistence", in the kindergarten group.

Teachers' ratings of temperament correlated highly with children's test scores. The scales with the highest correlation with test scores were persistence/attention, adaptability, the reverse of distractibility and the reverse of high activity level.

Multiple regression equations indicated that very few ratings of temperament and language level, possibly with the addition of mother's educational level, gave excellent predictions of children's test scores.

The preferred activities of children were in the gross motor, language and creative areas; there was much less emphasis on environmental study or science, or problem-solving. Pre-reading and pre-writing activities appeared to be important in the kindergarten though teachers did not explicitly attach priority to these activities. The general commitment of teachers was to an open active approach, in which children could make choices of activity.

The organization and equipment of activity centres, observed by the visiting research team covered a range of quality. Environmental studies/science appeared to be somewhat poorly served.

Senior kindergarten and junior kindergarten teachers agreed in the following priorities for educational objectives:

(1) Abilities to cope with personal social demands;

(2) Creating good feelings about learning and school;

(3) Cognitive intellectual abilities.

The "educational viewpoints" endorsed by teachers reflected a general commitment to an "open" activity approach to education using a variety of materials and giving children choice of activity. However, there was little relationship between stated educational viewpoints and actual practice in terms of the time committed by teachers to various areas of the program. Junior kindergarten teachers and senior kindergarten teachers differed to some degree in their emphases on educational viewpoints, the junior kindergarten teachers emphasizing more freedom by children and less emphasis on grouping and on more formal academic activities.

Teachers had a high measure of agreement on techniques of management and discipline, which were mainly persuasion, talking to the child and presenting good models of behaviour.

The adequacyof equipment of different areas of the program varied; environmental studies and science appeared to be least well provided for; there appeared to be a lack of provision for a rich experience of practical/structural mathematics. The different areas of the program differed in respect of the degree to which the teacher organized learning or taught directly, and the extent to which groups based on ability or progress were formed. At one extreme, some work in language and in mathematics required a high degree of teacher participation, in small and large groups whereas dramatic play and creative activities depended much more on children's choices and small, informal groups.

Teachers' expectations of the level of success of their children on a variety of 103 developmental/educational items were gathered. These expectations show that significant progress is expected during the course of the first year in school, for both junior and senior kindergarten children. There was an anomaly in the expectations, insofar as junior kindergarten teachers perceived their children making progress during the year which would enable them to overtake the kindergarten children, a year older.

Teachers' expectations did not, in general, agree closely with actual rating of skills, or objective performance on tasks observed at the same time. In general, expectations depended very much on the specific knowledge of the teacher of children's levels of development and the demands made by school tasks. Thus, expectations for pre-reading and pre-writing skills revealed that many teachers consider these activities as appropriate for only the top third in ability at the beginning of the kindergarten year, or were not able to make informed judgements on the level of skill involved.

Expectations were, in general, poor guides to actual performance at the beginning of the school year, and are likely to be even poorer guides to the child's level of performance by the end of the year.

TABLE OF CONTENTS

CHAPTER 1 - DESIGN OF STUDY

Page

1.1.0 Objective of study 1
1.2.0 Sampling 1
1.2.1 Boards of Education samples 1
1.2.2 Schools in the sample 2
1.2.3 Children 4
1.3.0 Method of collecting data 5

Part I

THE HOME AND PARENTAL BACKGROUND

CHAPTER 2 - THE FAMILY BACKGROUND AND PARENTAL PERCEPTIONS OF CHILD AND SCHOOL

2.1.0 Demographic and social aspects of the family environment 10
2.1.1 The interview 10
2.1.2 The sample 10
2.2.0 The status of the neighbourhood/socio-economic level 11
2.2.1 Status 11
2.2.2 Age-group 12
2.2.3 Physical amenities of dwelling 12
2.2.4 Amenities of neighbourhood 12
2.2.5 Characteristics of family and parents 13
2.3.0 Parental attitudes and practices 15

CHAPTER 3 THE CHILD IN THE FAMILY

3.1.0 Pregnancy, birth and early development 20
3.1.1 Health difficulties and illnesses in early childhood 20
3.1.2 Effects on the child's development 21
3.1.3 Relationships between children and parents in early childhood 21
3.1.4 Children's levels of development 24

CHAPTER 4 EXPERIENCE OF DAY CARE AND NURSERY SCHOOLS

4.1.0 Day care 26
4.1.1 Organization and staffing 26
4.1.2 Parents' perceptions and evaluation 27
4.2.0 Nursery schools 28
4.2.1 Organization and staffing 28
4.2.2 Parents' perceptions and evaluation 29
4.3.0 What do parents feel about need for preschool provision 29

CHAPTER 5 PARENTS' ATTITUDES TOWARD AND INTEREST IN SCHOOL

5.1.0 Parents' interest in school 31
5.2.0 Organization and staffing of school 32
5.3.0 Children's progress and evaluation 34
5.4.0 Parents' views on teachers, program and goals of education 34

CHAPTER 6 - THE HOME BACKGROUND (MAILED INTERVIEW)

Page

6.1.0 Check items 37
6.2.0 The family structure 38
6.3.0 The family background: personal and social characteristics of parents 39
6.3.1 The age of parents 39
6.3.2 The socio-economic status 39
6.3.3 The educational level 42
6.3.4 Recreational courses and further education 43
6.3.5 The country of origin of parents 44
6.3.6 Language 45
6.4.0 The material background of the family: housing and dwelling 46

CHAPTER 7 - CHARACTERISTICS OF THE HOME LIKELY TO AFFECT THE CHILD

7.1.0 Library, newspapers and reading of newspaper/magazines 49
7.1.1 Books and reading to children 49
7.1.2 Major activities of families to entertain and educate children 50
7.2.0 Television viewing of children 53
7.2.1 The pattern of children's recreation and activity 54
7.3.0 Physical care of children 55

CHAPTER 8 - THE CHILD'S CHARACTERISTICS

8.1.0 Characteristics of children: family origin, birthplace, family size 56
8.2.0 Height, weight, medical history and handicaps 56
8.3.0 Developmental levels of children according to parents 58
8.3.1 Developmental levels of children 59
8.4.0 Conditions affecting children 60

CHAPTER 9 - CHILDREN IN CARE AND PRESCHOOL EXPERIENCE

9.1.0 Length of time in care of persons other than parents 61
9.2.0 Children in day care 61
9.2.1 Ages where a child is in care or babysat 62
9.2.2 Preschool placements and activities 62

CHAPTER 10 THE CHILD AND THE SCHOOL; PARENTAL PERCEPTIONS AND INTEREST AND AMBITIONS

10.1.0 Siblings in school 64
10.1.1 The journey to school 64
10.2.0 Health and developmental checks 64
10.3.0 Arrangements for entry to school 65
10.4.0 Contact between parents and school 66
10.5.0 Parental ambitions: geese and swans 67

SUMMARY: PART I 69

PART II

THE CHILD IN THE SCHOOL

CHAPTER 11 - THE ORGANIZATION AND STAFFING OF THE SCHOOL, AND RELATIONSHIP TO THE COMMUNITY — Page

11.1.0 Neighbourhood, size and staffing of schools 74
11.2.0 Composition of junior kindergarten and kindergarten classes 74
11.3.0 The organization of schools 76
11.4.0 Continuity of program 77
11.5.0 Problems among children in schools 78
11.6.0 Staff organization and responsibilities 78
11.7.0 Liaison with parents, use of volunteers and parent-teacher associations 81
11.7.1 Volunteers and parent liaison 81
11.7.2 Parent-teacher associations 83
11.8.0 The philosophy and programs of the school 85

CHAPTER 12 - CHILDREN IN SCHOOL: TEACHERS' ASSESSMENTS AND TESTS

12.1.0 Teachers' assessments of developmental level 86
12.1.1 Response to school: teachers' observations: health, absence 86
12.1.2 The child's settling in school and social relationships 87
12.2.0 Ability, and progress in the first term 88
12.2.1 Ability/assessments by teacher 89
12.2.2 Estimated progress 90

CHAPTER 13 - THE TEST RESULTS 94

13.1.0 Receptive language 94
13.2.0 Test results, analysis and reporting 98
13.3.0 The group language test 98
13.3.1 Prepositions 99
13.3.2 Following directions 99
13.3.3 Oral expression 101
13.3.4 Similarities 101
13.3.5 Composition of items 102
13.3.6 Description 103
13.3.7 Vocabulary 103
13.4.0 Educational tests 104
13.4.1 Printing name 104
13.4.2 Printing letters 105
13.4.3 Spelling 105
13.4.4. Pre-Reading and reading 106
13.4.5 Reading numbers 106
13.4.6 Reading lower case letters 107
13.4.7 Reading upper case letters 107
13.4.8 Reading (Wide Range Test) 108
13.5.0 Mathematics 108
13.5.1 Rote counting 109
13.5.2 Block counting 110
13.5.3 Addition and subtraction 110

CHAPTER 13 - THE TEST RESULTS cont'd

13. 5.4 Number sequence 111
13. 5.5 Length 112
13. 5.6 Seriation 112
13. 5.7 Money concept 113
13. 5.8 Math problems 114
13. 5.9 Fraction recognition 115
13. 6.0 General comments on the developmental/educational tasks 115
13. 7.0 Motor activities 116
13. 8.0 Gross motor 117
13. 8.1 Fine motor skills 118
13. 9.0 Colour naming 119
13.10.0 Analyses of summary test scores 122
13.11.0 Differences between children who attended junior kindergarten and who did not before entering kindergarten 125

CHAPTER 14 - ASSESSMENT OF DEVELOPMENTAL LEVEL 127

14. 1.0 Self-help skills 127
14. 2.0 Assessment of social skills 128

CHAPTER 15 - LANGUAGE ACQUISITION AND COMPETENCE 130

CHAPTER 16 - TEMPERAMENT AND RESPONSE PATTERN 134

16. 1.0 Intensity of reaction 134
16. 1.1 Adaptability 135
16. 1.2 Threshold of responsiveness 135
16. 1.3 Activity level 136
16. 1.4 Approach-withdrawal 137
16. 1.5 Quality of mood 137
16. 1.6 Distractibility 139
16. 1.7 Attention span and persistence 139

SUMMARY: CHAPTERS 12 to 16 - Ratings and Tests 141

CHAPTER 17 - THE TEACHERS' OBSERVATIONS OF THE INVOLVEMENT OF THE CHILD IN DIFFERING ASPECTS OF THE PROGRAM 148

17. 1.0 Physical activities involving the entire body (using no equipment) e.g. jungle gym 148
17. 1.1 Physical activities involving entire body without equipment 149
17. 2.0 Physical activities involving eye-hand co-ordination e.g.(puzzles, blocks) 149
17. 3.0 Receptive language activities (listening to stories, records, instructions) 150
17. 4.0 Expressive language - Telling stories, playing word or rhyme games, describing 150
17. 5.0 Reading letters/words, looking at books, following a story in a book 151
17. 6.0 Number/math activities (games, blocks, rods, equipment) 153
17. 6.1 Arithmetical computation (number facts, oral and written games, etc) 153

CHAPTER 17 - THE TEACHERS' OBSERVATIONS ..... cont'd

17. 7.0 Writing, letters and numbers or copying geometrical forms 154
17. 8.0 Science activities (experiments, plants, animals, nature) or cognitive activities (problem solving, classifying) 155
17. 9.0 Role-playing activities (dressing up, dramatic play with puppets, toys, etc.) 156
17.10.9 Activities in producing music or rhythm, or playing instruments 157
17.11.0 Listening to music or rhythm 158
17.12.0 Creative activities, drawing, painting, finger paint, collage, clay, sand, etc. 159
17.13.0 Preference for types of activity in the kindergarten classroom 159
17.13.1 Senior kindergarten 159
17.13.1 Junior kindergarten 160

PART III

THE OBSERVATION OF THE CLASS

CHAPTER 18 - THE INDEPENDENT OBSERVER'S CHECKS ON ACTIVITIES 162

CHAPTER 19 - INDEPENDENT ASSESSMENT OF THE CLASSROOM: ORGANIZATION, SPACE

19.1.0 Size and equipment of classroom 165
19.2.0 Characteristics and organization of the classroom 166
19.3.0 The organization and use of activity areas 166
19.4.0 Outdoor activity areas 168
19.5.0 Effective organization and use of centres 169
19.5.1 Gross-motor activities 169
19.5.2 Science and environmental study 169
19.5.3 Number/math 170
19.5.4 Centres for quiet activities, or quiet areas 170
19.5.5 Centres for role playing/dramatic play 171

CHAPTER 20 - INDEPENDENT ASSESSMENT OF THE CLASSROOM: ASSESSMENT OF TEACHER'S CHARACTERISTICS AND INTERACTION WITH CHILDREN

20.1. 0 The "Teacher Language" checklist 172
20.1. 1 Tone of voice 172
20.1. 2 Employment of usage/grammar 172
20.1. 3 Good/frequent use of positive statements 172
20.1. 4 Teacher speaks directly to child 173
20.1. 5 Teacher speaks at child's level 173
20.2. 0 Teacher characteristics in class 173
20.2. 1 Stereotyped versus original 173
20.2. 2 Autocratic versus democratic 173
20.2. 3 Inflexible versus flexible 173
20.2. 4 Self-confidence 173
20.2. 5 Organizational/planning 174
20.2. 6 Impulsive versus controlled behaviour 174

CHAPTER 20 - INDEPENDENT ASSESSMENT ..... Cont'd

20.2. 7 Understanding of children's needs 174
20.2. 8 Harshness-kindness 174
20.2 9 Handling of discipline 175
20.2.10 Unpleasant versus cheerful 175
20.2.11 Aloof versus very approachable 175
20.2.12 Appearance: drab versus pleasing 175
20.2.13 Appearance: listless versus buoyant 175

PART IV

THE TEACHER - CHARACTERISTICS AND PHILOSOPHY

CHAPTER 21 - CHARACTERISTICS OF TEACHERS; QUALIFICATION AND EXPERIENCE: ORGANIZATION OF CLASSES

21.1.0 Qualifications and training of teachers 178
21.2.0 Organization of class and program 181

CHAPTER 22 - THE EVALUATION AND ASSESSMENT OF CHILDREN; SCREENING AND INFORMATION ON CHILDREN AT ENTRY TO SCHOOL

22.1.0 Information on child at entry to school 183
22.1.1 Information teachers would like to have 184
22.2.0 Learning or behaviour difficulties - referral 185
22.3.0 Support services 185
22.4.0 Methods of assessment 186
22.5.0 Assessing and recording progress 187
22.5.1 Assessing - particular skills and abilities 189
22.5.2 Assessing - specific groups 190
22.5.3 Report cards and reporting to parents 190
22.5.4 Report card - senior kindergarten 192
22.5.5 Report card - junior kindergarten 192
22.5.6 Assessing - bright or advanced children 193
22.5.7 Defining children with special needs 194

CHAPTER 23 - PARENT - TEACHER RELATIONS

23.1.0 Meetings with parents 198
23.1.1 Senior kindergarten 198
23.1.2 Junior kindergarten 198
23.1.3 Meetings most effective - senior kindergarten 198
23.1.4 Meetings most effective - junior kindergarten 199
23.2.0 Work sent home - first week 199
23.3.0 Communication with parents 199
23.3.1 Senior kindergarten - newsletter 199
23.3.2 Junior kindergarten - newsletter 200
23.3.3 Senior kindergarten - interview 200
23.3.4 Junior kindergarten - interview 200
23.4.0 Topics discussed with parents 200
23.4.1 Senior kindergarten 200
23.4.2 Junior kindergarten 201
23.5.0 Parents as classroom volunteers 201
23.5.1 Senior kindergarten 202
23.5.2 Junior kindergarten 202

CHAPTER 23 - PARENT - TEACHER RELATIONS cont'd

23.6.0 Work sent home and special events 202
23.6.1 Work sent home - senior and junior kindergarten 202
23.6.2 Special events - senior and junior kindergarten 203
23.7.0 Parent observation of class 203

CHAPTER 24 - THE ORGANIZATION AND EQUIPMENT OF THE CLASSROOM

24.1.0 Description of classroom 205
24.1.1 Play area - senior kindergarten 205
24.1.2 Play area - junior kindergarten 205
24.1.3 Outdoor play equipment 206
24.2.0 School facilities 206
24.2.1 Gym 206
24.2.2 Swimming pool 206
24.2.3 Music rooms 206
24.2.4 Adventure playground 206
24.2.5 Library 207
24.2.6 Lunchroom 207
24.3.0 Learning centres and equipment 207
24.3.1 Gross motor centre 207
24.3.2 Science centre 208
24.3.3 Quiet centre 209
24.3.4 Math centre 210
24.3.5 Creative centre 211
24.3.6 Role playing centre 212
24.3.7 Music and listening 212
24.3.8 Summary - equipment total 213
24.4.0 Equipment for teachers' use 214
24.4.1 Senior kindergarten 214
24.4.2 Junior kindergarten 214

CHAPTER 25 - EDUCATIONAL OBJECTIVES AND VIEWPOINTS

25.1.0 Educational objectives 216
25.1.1 Ranking - educational objectives 216
25.1.2 The three most important objectives 220
25.1.3 The three least important objectives 221
25.1.4 Discussion of objectives 222
25.2.0 Educational viewpoints - discussion of statements 223

CHAPTER 26 - TEACHING AND DISCIPLINE TECHNIQUES

26.1.0 Teaching techniques and approaches 233
26.1.1 Teaching techniques 233
26.1.2 The two techniques or approaches judged most useful 236
26.1.3 The two techniques found least useful 236
26.2.0 Discipline/management techniques 237
26.3.0 Summary: teaching approaches and discipline techniques 239

CHAPTER 27 - THE ORGANIZATION OF AREAS OF ACTIVITY AND OF GROUP WORK

27.1.0 Organization of areas of activity; time 240
27.2.0 Location of various learning activities 246

CHAPTER 28 - THE ORGANIZATION OF GROUP ACTIVITIES

28.1.0 Grouping for learning activities 249
28.1.1 The organization of group activities 250
28.1.2 Senior kindergarten responses 250
28.2.0 Discussion 252
28.2.1 Teacher - direction 252
28.2.2 The basis for formation of groups 254
28.2.3 The size of learning group 254

CHAPTER 29 - TEACHERS' EXPECTATIONS

29.1.0 Definition of Expectations 256
29.2.0 The scoring of expectations 257
29.3.0 Reporting and analysis of expectations 259
29.3.1 Difficult and possibly "Uncertain" items for the junior and the senior kindergarten 261
29.4.0 Discussion: all items 262
29.4.1 Accuracy and dependability of expectation for junior kindergarten 263
29.4.2 Comparisons of the program/developmental areas 265
29.5.0 Analysis of expectations in different areas of the program 269
29.5.1 Self-help skills 269
29.5.2 Gross-motor/physical education skills 270
29.5.3 Eye-hand co-ordination/fine motor skills 271
29.5.4 Pre-reading abilities 272
29,5.5 Pre-writing skills 273
29.5.6 Receptive language abilities 274
29.5.7 Expressive language 275
29.5.8 Number - mathematics concepts and skills 276
29.5.9 General knowledge/cognitive abilities 277
29.5.10 Social - personal skills 278
29.6.0 Comparisons for the junior kindergarten 281
29.6.1 Language abilities 281
29.6.2 Self-help skills 282
29.6.3 Social-personal skills 283
29.6.4 Receptive language 283
29.6.5 General cognitive abilities 284
29.6.6 Gross-motor skills 284
29.6.7 Fine motor/eye-hand co-ordination skills 284
29.6.8 Number/math abilities 285
29.6.9 Knowledge of colours 286
29.6.10 Pre-reading skills 286
29.6.11 Pre-writing skills 287
29.7.0 Comparisons for the senior kindergarten 288
29.7.1 Expressive language 288
29.7.2 Self-help skills 288
29.7.3 Social-personal skills 289
29.7.4 Receptive language 289
29.7.5 General/cognitive abilities 290
29.7.6 Gross-motor skills 290
29.7.7 Fine/motor/eye hand co-ordination skills 290
29.7.8 Number/math abilities 291
29.7.9 Knowledge of colours 292
29.7.10 Pre-reading skills 293
29.7.11 Pre-writing skills 293
29.8.0 General conclusions 294

CHAPTER 30 - TEACHERS' EXPECTATIONS AND KINDERGARTEN EXPERIENCE

30.1.0 The teachers' experience related to classroom, motivation, discipline, educational views 298
30.1.1 Teachers' experience, classroom conditions 298
30.1.2 Motivation and discipline 298
30.1.3 Educational viewpoints 298
30.1.4 Degree qualification 299
30.1.5 Board of education 299
30.1.6 Equipment in classroom 299
30.2.0 Teachers' stated objectives and commitment of time to specific activities 300
30.2.1 Junior kindergarten 301
30.2.2 Senior kindergarten 302
30.3.0 Teachers' educational viewpoints and commitment of time to specific activities 304
30.3.1 Junior kindergarten group 305
30.3.2 Senior kindergarten group 305

PART V

INTERRELATIONSHIPS BETWEEN FORMS

CHAPTER 31 - SOCIO-ECONOMIC STATUS AND EDUCATIONAL LEVEL OF PARENTS AND THEIR CORRELATES

31.1.0 Relationship between mothers' and fathers' socio-economic level and educational level 307
31.2.0 Relationship involved in "Parent reads to the Child" 310
31.3.0 Relationships involved in"amount of TV watching done by child in the evening" 310
31.4.0 Relationships with "did have a chance to talk to teacher and/or principal before the child started school in September" 310
31.5.0 Relationships with "Would expect child to be in top one third in ability in the class" 311
31.6.0 Developmental skills 311
31.7.0 Mother's educational level as predictor 312

CHAPTER 32 - PARENTS' SOCIO-ECONOMIC STATUS AND EDUCATIONAL LEVEL AND TEST SCORES

32.1.0 The effects of controlling for father's or mother's socio-economic status and educational level 317
32.2.0 Conclusions 324
32.3.0 The interactions of parental socio-economic/educational level variables and child's test performance 324

CHAPTER 33 - ASSOCIATIONS BETWEEN HOME-EDUCATIONAL MEASURES, TEST PERFORMANCE AND TEACHERS' RATING OF LANGUAGE

33.1.0 Family's membership of public library and test performance 328
33.2.0 Family's membership of public library and teachers' ratings of language 328
33.3.0 Does parent use library and test performance: junior kindergarten 329

CHAPTER 33 - ASSOCIATIONS BETWEEN HOME-EDUCATIONAL ....Cont'd

33.4.0 Actual use of library and teachers' rating of child's language: junior kindergarten 330
33.5.0 Mother's liking for reading and child's test performance 330
33.6.0 Mother's liking for reading and teacher's rating of child's language 330
33.7.0 Father's liking for reading and child's test performance 330
33.8.0 Father's liking for reading and teacher's language rating 331
33.9.0 Reading to the child and test performance 331
33.10.0 Language other than English/French spoken in the home and test performance 331
33.11.0 Family's newspaper usage and test performance 331
33.12.0 Family's newspaper usage and teachers' language rating 331
33.13.0 Membership of library and test performance 331
33.14.0 Does parent actually go to library? and test performance 332
33.15.0 Does mother like to read? and test performance 332
33.16.0 Father's liking for reading and test performance 332
33.17.0 Use of language other than English/French in the home and test performance 332
33.18.0 Use of language other than English in the home and teachers' ratings of language 332
33.19.0 Family newspaper readership and child's test performance 333
33.20.0 Number of places and vocabulary test 333
33.21.0 Number of places visited and evening television 333
33.22.0 Relationship of test performance to other variables 336
33.22.1 Type of neighbourhood 336
33.22.2 Dwelling environment 337
33.22.3 Age of mother 337
33.22.4 Number of children in family 337
33.22.5 Father's age 338
33.22.6 Sex of child 338

CHAPTER 34 - THE TEMPERAMENT RATINGS AND THEIR ASSOCIATIONS

34.1.0 Relationship between parents' and teachers' temperament ratings: senior kindergarten 339
34.1.1 Junior kindergarten 340
34.2.0 Relationship between temperament ratings and test scores: senior kindergarten 340
34.2.1 Intensity of reaction 341
34.2.2 Adaptability 341
34.2.3 Approach-withdrawal 342
34.2.4 Threshold of responsiveness 342
34.2.5 Activity level 343
34.2.6 Mood quality 343
34.2.7 Distractibility 343
34.2.8 Attention and persistence 344
34.3.0 Intensity of reaction: junior kindergarten 344
34.3.1 Adaptability 344
34.3.2 Quality of mood 345
34.3.3 Distractibility 345
34.3.4 Threshold of responsiveness 346
34.3.5 Activity level 346
34.3.6 Approach-withdrawal 346
34.3.7 Attention span 347

CHAPTER 34 - THE TEMPERAMENT RATINGS ...... Cont'd

34.4.0 Significance of the results 348
34.5.0 The multiple regression analyses 349
34.5.1 Junior kindergarten 350
34.5.2 Multiple regression equations - senior kindergarten 352
34.6.0 Parents' ratings of the temperament scales, and children's tests 354

CHAPTER 35 - TEACHERS' RATINGS OF CHILDREN'S LANGUAGE PERFORMANCE AND THEIR RELATIONSHIPS WITH CHILDREN'S TEST PERFORMANCE

35.1.0 Junior kindergarten: significant correlations with language ratings 359
35.1.1 Senior kindergarten: significant correlations with language ratings 360

CHAPTER 36 - MULTIPLE REGRESSION ANALYSIS OF THE RELATIONSHIP BETWEEN TESTS AND TEACHERS' ESTIMATE OF ABILITY

36.1.0 Senior kindergarten: multiple regression using full test battery 362
36.1.1 Junior kindergarten: multiple regression using full test battery 362
36.2.0 Senior kindergarten: multiple regression using selected tests 363
36.2.1 Junior kindergarten: multiple regression using selected tests 363
36.3.0 Predictive equations for the test performance of children using teachers' ratings and parental status 364

CHAPTER 37 - FACTOR ANALYSIS

37.1.0 Temperament scales 369
37.2.0 Tests 372

SUMMARY 375

RECOMMENDATIONS 377

APPENDIX

Differences between social/familial factors in Francophone and Anglophone groups 379

Correlation between TV viewing by children in the morning, afternoon and evening 381

Socio-economic/status, parental education and other parental characteristics 384

TABLES

Teachers' expectations - Junior kindergarten 392

- Senior kindergarten 398

Factor analyses of correlations between tests and teachers' estimates 404

BAR GRAPHS

The amount of time parents spend with their child compared to the quality of their housing 405

The amount of time children spend watching television: morning, afternoon and evening 406

REFERENCES 407

TEST REFERENCES 409

CHAPTER 1 – DESIGN OF STUDY

1.1.0. Objective of Study

The purpose of this study was to obtain and analyze information on the characteristics of the child entering school for the first time in junior kindergarten, senior kindergarten and grade one.

1.2.0. Sampling

The boards participating in the study were selected so that the boards represented the range of variation in Ontario.

The intention of the sampling was to incorporate the following variation: geographical (southern, northern and eastern); demographic; large urban centres vs rural, industrial vs suburban; small board vs large board.

The sampling scheme was based on three strata: of boards of education (directed quota sampling); representative random sampling of schools within each board; random sampling of an equal group of children within each school.

The sample was also planned to include Francophone schools, and Boards administering junior kindergartens were included as well.

1.2.1. Boards of Education Samples

To attempt to meet these requirements the following boards were included in the sample and agreed to participate:

1. Nipissing Separate School Board was selected to represent (i) northern Ontario, (ii) French and English language and (iii) junior kindergarten as well as senior kindergarten classes.
2. Kent and Essex were included as representative rural counties and, both being relatively small boards of education, the two were combined and treated as one sample for the purpose of this study in order to balance the smaller number of schools sampled in each

county with the variety of two counties.

3. The Lincoln Board of Education has both a rural and an urban component. The urban centre in this county, St. Catharines, represents an average size city.
4. Hamilton Board of Education was included as a large industrial city. It was of special interest because of the junior kindergarten program in 'inner city' schools.
5. Etobicoke Board of Education is a large metropolitan Toronto branch, and has junior as well as senior kindergartens. The borough also has a wide 'demographic' range, from 'inner city' to upper middle classes areas.

One large Eastern Ontario board with junior kindergarten and Francophone components decided not to participate. The refusal came too late for an equivalent substitute to be included.

A North-Central county board contiguous to the Toronto area, with population representing the suburban Toronto area and rural areas was asked to participate, but, because of other research proceeding, felt it could not participate.

Refusals to participate were received from the Metropolitan Separate School Board (Toronto) and a large Southern Ontario board, too late to permit substitution.

1.2.2. Schools in the Sample

Schools within each board were selected randomly by a procedure adopted from that used in the national surveys of attainment in England and Wales. Essentially, this procedure consisted of obtaining for each board the list of schools and the relevant population of children in each school. The list was randomly arranged. The appropriate sampling fractions of the total child population were taken, to obtain 1/9 of the population. From a random start, the list was entered in steps corresponding to the number indicated by the sampling fraction. This had the effect of selecting 1 school in 9 mechanically and randomly. Two separate random samples of schools were drawn from each board and the advice of board officials was sought as to which sample appeared the most representative.

Nine (9) schools were selected from each board, the proportions of total schools drawn per board ranging from 1/6 to 1/9.

The schools selected were as follows:

County	School	Size	Grades	School Location
Essex	Amherstburg	472	K-8	Small town
	Kingsville	581	K-8	Village
	East Mersea	295	K-8	Rural
	Queen Elizabeth	348	K-6	Small town/Leamington
Kent	H.A. Tanser Suburban	175	K-6	Small City (Chatham)
	John N. Given	515	K-8	Small City (Chatham)
	McNaughton Avenue	596	K-8	Small City (Chatham)
	Ridgetown	334	K-8	Village
	Romney Central	149	K-6	Rural
Lincoln	Calder	120	K-4	Rural
	Jacob Beam	512	K-8	Small Town (Beamsville)
	Jordon Station	139	K-3	Rural
	Parliament Oak	338	K-8	Small Town (Niagara-on-the-Lake)
	Prince Philip	543	K-6	City (St. Catharines)
	Briardale	305	K-7	City (Suburb of St. Catharines)
	Lincoln Centennial	570	K-6	Suburb of St. Catharines
	Gracefield	243	K-8	Suburb of St. Catharines
	Memorial	306	K-6	City of St. Catharines
City of Hamilton	Cecil B. Stirling	649	K-8	Suburban
	Fairfield	225	K-5	City
	Huntington Park	366	K-5	Suburban
	Lake Avenue	790	K-5	Suburban
	Queen Mary	589	JK-8	'Inner City'
	Seneca Junior	506	K-6	City
	Strathcona	292	JK-6	'Inner City'
	Centennial Junior	500	JK-5	'Inner City'
	Eastmount Park Junior	250	K-6	City

County	School	Size	Grades	School Location
Borough of Etobicoke (Toronto)	Buttonwood Hill Jr.	339	JK-5	Suburban
	Elmlea Junior	551	JK-5	City
	George R. Gauld	253	JK-6	'Inner City'
	Highfield Junior	514	JK-5	City
	Lambton Kingsway Jr. and	588	JK-8	City (affluent)
	Melody Village	531	JK-5	City
	Princess Margaret	355	JK-6	Suburban
	Seventh Street	388	JK-5	'Inner City'
	Wedgewood Junior	464	JK-5	City
North Bay				
	Corpus Christi	109	JK-6	Suburban/rural
	Our Lady of Fatima	390	JK-8	Suburban
	Sacred Heart	282	JK-8	Suburban
	St. Paul	240	JK-8	City
	St. Anne	382	JK-8	City
	Our Lady of Sorrows	308	JK-8	Rural/Small Town (Sturgeon Falls)
	St. Joseph	417	JK-6	Small Town (Sturgeon Falls)
	Notre Dame des Ecoles	150	JK-K and 3-6	Small Town (Sturgeon Falls)
	Lorrain	263	K-8	Village/rural (Bonfield)

SAMPLE TABLE (CHILDREN)

County	JKg	Kg	Grade 1	Total
Kent and Essex	N/A	27	-	27
Lincoln	N/A	27	-	27
Hamilton	9	27	-	36
Etobicoke	31	32	2	65
North Bay	27	27	-	54
Total	67	140	2	209

1.2.3. Children

Within each school, class lists were obtained for each kindergarten class and also each junior kindergarten class where these existed. Three (3) children were selected randomly in each class by using random number tables. Etobicoke was an exception to this: In three of their nine schools, three had a combined junior/senior kindergarten class. Wherever this occurred three children were also randomly selected from the class.

In practice this meant that in 3 schools in Etobicoke children were selected from 3 classes rather than two.

This study was also intended to include any children in grade one who had not attended an elementary school previously. It was expected (from the Ministry of Education's statistics) that this group would be only about 2% of the population. Out of 209 children, two children were found in grade one who had not attended an elementary school previously (.91 percent). Both children were in Etobicoke. One had attended a day care centre and the other was an immigrant from Colombia, South America.

1.3.0. Method of Collecting Data

The data for the survey were gathered by means of (i) questionnaires mailed to parents, teachers and principals; (ii) interviews with parents and teachers;(iii) classroom observations of children in this program; and (iv) direct testing and checking of children's developmental levels and educational attainment by teachers, assisted by the research staff.

The gathering of data was done by one full-time project director and two halftime research assistants who helped devise the instruments, took responsibility for organizing and administering the study, and visited parents and schools to carry out interviews.

For this purpose six questionnaires (Forms) were used.

Form I was a questionnaire mailed to the parent (after parental consent to participate was obtained). It was designed to gather factual information as follows: family size; birth dates of children; marital status; country of birth;preferred language(s) of father, mother and child; parents' socio-economic status (occupation) and educational level; type of housing; family leisure activities; health of the selected child; developmental levels; television watching habits; pre-school activities; parental attitudes toward school and interest; and parental expectations of the child.

Form II was the guide used by research staff to guide the parental interview. Because of time constraints a randomly selected 2/3s of the parents were interviewed. This questionnaire expanded on the questions on Form I. It included:

1. A few questions on pregnancy, birth of child and his/her first 5 years.
2. Developmental scale (child's growth and development checklist) - very brief.
3. Items from temperament scale (from Thomas and Chess: "Temperament and Development").
4. Discipline in the home.
5. Family activities - vacations, pattern of reading in home, television viewing, etc.
6. Child's reaction to introduction to school - both Spring and Fall
7. Parental involvement with school, expectation of school, attitude to progress reports.
8. Child's experience before entering school - day care, nursery school, nursery or play group activities, etc.
9. Checklist of physical environment of home.
10. Checklist of provision of stimulation through equipment, toys in home.
11. Parent stimulation of learning behaviour - e.g. teaching of colours, reading, self-help skills, etc.

The research staff visited each kindergarten class for an entire school session. This gave them an opportunity to observe the three children in the study, to meet the principal, and complete a questionnaire .

While observing the children, notes were made on the activities the children appeared to enjoy, the centres they preferred to use, how long they stayed in each centre, and whether they tended to play and learn in groups or by themselves.

The physical appearance of the classroom, its size, 'brightness', arrangement of centres (if centre oriented) or learning opportunities, and the type of and variety of equipment and toys were noted.

Some measurements on the teachers' relationships with the children and her program were taken. The measures were intended to gauge relationships included items used as 'approachableness'; use of positive statements; use of compliments and preferred handling of discipline. The program measures consisted of use or non-use of routine or original procedures; flexibility in programming; use or non-use of learning centres; and the amount of 'free activity' time. It should be emphasized that these items are factual, not evaluative of teaching efficiency or personality.

It must be stated that these measures are crude. The classroom was visited once only. To augment these observations, each teacher was asked to fill in an extensive questionnaire. It was composed of the following:

1. Qualifications of the teacher,
   Number of years experience
2. Organization of teaching staff in Junior Kindergarten, Kindergarten and Grade 1

   Use of teacher's aides
   Use of voluntary help
3. Use of screening test before school entry
4. Evaluation and assessment of child's progress referral of children for assessment and help
5. Parent-teacher relations/communication
6. Classroom checklist of equipment, use of space, facilities, resources
7. Division of time by activity and use of groups
8. Teacher's educational objectives
9. Teaching techniques - means of achieving these goals
10. Educational viewpoints and philosophy
11. Teacher's expectations of what the class will achieve at the beginning and end of school year in terms of:
    self-help, gross motor, fine motor, pre-reading, pre-writing
    receptive language, expressive language, number skills, cognitive skills, social skills.

If time permitted, the researcher and the teacher discussed the three children in the study. The researchers then compared their observations with the teacher's assessment of the child.

The principal was also asked to fill in a questionnaire (Form III), on the organization of the school items such as: grades, open concept; number of pupils; number of teachers; purchasing of equipment; purpose of staff meetings; the philosophy of the principal; the arrangements for continuity between junior kindergarten, senior kindergarten and grade one; the use of volunteers; use of a Parent-Teacher Association and principals' attitudes about the value of such associations.

To measure the children's abilities, the teachers were asked to administer several brief developmental and educational tests, and to fill in a comprehensive checklist. The following was included.

Check lists:

(individual child)

1. Self-help skills
2. Temperament scale (drawn from Chess et al.)
3. General health - absences and adjustment to school- very brief
4. The time child spends in various activities while in school

Tests: (These items are drawn from existing tests and checklists e.g. DISC., Circus test, Windsor Project, Vallett Primary Skills)

Number skills:

1. Rote counting
2. Concept of 3, 5, 7, 10, 12
3. Math vocabulary (e.g. more than, less than equal, short, long, before)
4. Problems
5. Seriation

(The above tests are individual)

Receptive language

1. Understanding prepositions (in, in front of, behind)
2. Following directions
3. Laterality

Expressive language - brief items:-

1. Recognizing similarities and differences
2. Identification of action in a picture
3. Opposite analogies
4. Composition of items (e.g. What is a spoon made of.) (Drawn from Vallett)
5. Description of pencil, penny (Circus)
6. Naming colours (Windsor Project)
7. Vocabulary (definition)
8. How words work (Circus)

Pre-writing

1. Copying numbers and letters (group), writing name and letters
2. If Grade 1, Wide Range Achievement test - spelling (group)

Motor skills — Items taken from DISC, Portage and Carolina Scales

Gross

1. Walking along a straight line
2. Throwing bean bag up in the air
3. Skipping smoothly
4. Bouncing and catching a large ball

Fine

1. Drawing of geometric forms (Ilg and Ames)
2. Cutting along a straight line
3. Following a path with a pencil between two lines

Data were mainly pre-coded. Information was coded, key-punched and entered on a computer. Because of the considerable amount of data available (800 items on the teachers' instrument alone), it was necessary to compute data for each instrument separately (SPSS program) and use a separate program for cross-tabulations between instruments. A tremendous amount of information is potentially available. As a first step,basic frequencies were calculated for the most important items on all questions and cross tabulations were carried out on variables selected as likely most important.

PART I

THE HOME AND PARENTAL BACKGROUND

CHAPTER 2 – THE FAMILY BACKGROUND AND PARENTAL PERCEPTIONS OF CHILD AND SCHOOL

This chapter is based on information obtained from parents, in particular that based on Form II of the research instruments, the face-to-face interview with parents. It is based on 134 cases, approximately 2/3s of the total sample of children studied (see previous chapter).

2.1.0 Demographic and Social Aspects of the Family Environment

2.1.1. The Interview

The interview was judged by the research worker as having gone well in 88 percent of cases and with some difficulty in 12.7 percent. The parent in the interview was judged as communicating effectively, with good grammar and vocabulary in 87 percent of instances; 13 percent of parents had a native language which was other than English. The person interviewed was the mother in 74.6 percent of cases and both parents in 21.6 percent.

2.1.2. The Sample

The sample was distributed as follows in terms of neighbourhood: Urban 28.4 percent, suburban 44.8 percent, small town 10.4 percent, rural or farm 15.6 percent. This reflects the facts of sampling i.e. the inclusion of two city areas and, in particular, the inclusion of a large sample, of both junior kindergarten and kindergarten children from a Metropolitan Toronto borough. These facts are illustrated by the breakdown in terms of county or city:-

Etobicoke (Metro Toronto borough)30.1 percent, North Bay (Nipissing) 24.6 percent, Hamilton city 17.2 percent, Lincoln County 12.7 percent, Kent and Essex combined 13.4 percent.

In the sample, there were 70 (52.2 percent) boys and 64 (47.8 percent) girls. This confirms that the sampling of children within schools is random in this respect.

There were 65.7 percent of children in kindergarten classes and 32.5 percent in junior kindergarten. Only 1 child (0.7 percent) in Grade 1. This confirms the sampling pattern described in Chapter 1.

Further analysis showed that in the whole sample 21.6 percent of children had attended both junior kindergarten and kindergarten and 9 percent had not, while 35.8 percent had no junior kindergarten available. Put another way, about a third (32.6 percent) of the 88 children in kindergarten classes had previously attended junior kindergarten. This reflects the distribution of kindergarten and junior kindergarten classes in the sample, and the joint occurrence of junior and senior kindergarten classes in a major part of the sample: Etobicoke and Nipissing.

2.2.0. The Status of the Neighbourhood/Socio-economic Level

The status of the neighbourhood was assessed in detail by checking factors such as quality of housing, amenities such as trees and lawns, etc. Questions were also asked of the informants about the availability of facilities such as parks, shopping facilities, skating and swimming facilities, libraries, etc. within 15 minutes drive, and their use of these facilities. In addition, the research workers rated the neighbourhood in terms of socio-economic level from high to low.

2.2.1. Status

The distribution of ratings of neighbourhood status was symmetrical and covered the full range possible. Median ratings were 51.5 percent, low 20.1 percent and lowest 1.5 percent. The ratings for high and very high were similar. This distribution confirms that the study contained the full range of socio-economic family setting, in terms of neighbourhood.

2.2.2. Age-group

The age-group of the neighbourhood was: mixed ages of residents 68.7 percent and young families predominantly 23.1 percent. This high occurrence of "young family" neighbourhoods might be expected since these families would typically be composed of young adults. It is significant for children's experience that 6.7 percent of neighbourhoods were described as being without close neighbours.

2.2.3. Physical Amenities of Dwelling

Amenities of dwelling were described directly as follows by the research worker, from observation. In general, a high level of amenities and convenience was recorded: Interior of dwelling reasonably bright 97 percent; dwelling not noticeably noisy 91 percent; grass and trees in neighbourhood 88.7 percent; at least 100 square feet of space per person 97.7 percent; rooms not overcrowded with furniture 97 percent; all visible rooms reasonably clean and uncluttered 92.5 percent; child's outside play area appears safe 88 percent. However, non-physical characteristics were slightly less positive. The child's art was displayed in 70.7 percent of cases; television was observed to be on continuously, even throughout the interview in 24.8 percent of cases.

2.2.4. Amenities of Neighbourhood

Neighbourhood in general had good facilities within 15 minutes drive as reported by parents. There were 98.5 percent of parks or equivalent, small corner store 93.2 percent, skating rink 89.5 percent, public library 86.5 percent, swimming pool 85.7 percent, shopping mall 84.2 percent. By contrast, children's movies were available in 65.4 percent of cases and adventure playgrounds in 48.9 percent.

Comparison with the use of these facilities reported by parents is interesting.

Parents used them as follows:

Parks 94 percent; small corner store 90.2 percent and shopping mall 84.2 percent. Good use was made of the swimming pool, 72.7 percent, and skating rink, 69.9 percent,though use appears significantly lower than availability. The adventure playground was used by 48.7 percent of parents,about the same proportion as had these available. However, public libraries were used by only 54.1 percent of parents, significantly fewer than had these available.

There is, however, no clear and significant association between existence of facilities, or use, and measures of the status of the neighbourhood.

The "learning environment" of the home (e.g. toys and use of toys, reading, attention to child) is described later, in relation to the child's environment and parental attitudes to learning and discipline.

2.2.5. Characteristics of Family and Parents

The mother had interests or hobbies in 88 percent of cases and read regularly in 88.8 percent of cases. There was no significant relationship between interests or reading and estimates of status of neighbourhood (see above).

Mother's interests appeared traditional in pattern: home activities 36.6. percent, crafts 77 percent, reading 14.1 percent, gardening activities low, at 7.5 percent, as was music at 5.2 percent. Quiet activities contributed 4.7 percent and club membership 3.8 percent.

To set the high level of reading in context:- Mother's reading was mainly recreational and non-technical. It consisted of novels 28.6 percent; magazines 26 percent; newspapers 22 percent; non-fiction 13.1 percent; and literature 2.4 percent.

There appeared to be no significant relationship between interests or reading, and status of neighbourhood.

The father had hobbies or interests in 76 percent of cases and liked to read in 71.6 percent, both of them lower in frequency than mother's level of activity.

Participation in sports, active or spectator was unexpectedly low - 52.8 percent. There was no significant relationship between father's participation in sport and status of neighbourhood, but there is suggestion in the data of less participation in sports in the higher-status neighbourhoods.

Father's interests were, predictably, more mechanical or related to sports: mechanical/craftwork 29.2 percent, sports 20.5 percent, but there were also more of the following activities; quiet activities 19.2 percent and gardening 16 percent among fathers. Fathers read less as a main interest, 8.3 percent. They shared the same level of interest as mothers in music, 5.1 percent and clubs 2.6 percent.

Father's reading also differed from that of mothers. The majority interest was in reading newspapers 36.6 percent, followed by magazines 22 percent, novels 17.7 percent. There was more use of non-fiction, 10.2 percent, and trade journals, 6.5 percent but practically no reading of literature, 0.5 percent.

There is no significant relationship of interests or reading to status of neighbourhood.

The general impression from these responses is of a "traditional" family pattern and male-female roles, with a strong emphasis on family pursuits. This is confirmed by the following.

A high proportion of parents (either father or mother or both) claimed membership of a church group, 36.5 percent. A surprisingly high number claimed affiliation with an ethnic group, 5.9 percent.

Only 41.2 percent belonged to a leisure organization apart from the above, and only 3.5 percent belonged to a political group or party.

The vacations taken by families are also interesting. Of the total,75.4 percent take regular vacations away from home, which leaves a significant proportion of families, 24.6 percent,or nearly a quarter who do not report having regular vacations away from home.

The patterns is as follows: 23.7 percent go to the cottage, 23.7 percent travel within Canada or the U.S.A. This compares with travel within the province by 17.5 percent. Camping is reported by 17.5 percent, which could be related to the difficulties of coping with young children on camping trips. Visiting relatives for vacations is relatively infrequent, at 13.4 percent.

2.3.0. Parental Attitudes and Practices

A majority, 70.1 percent, of parents had read literature on child-rearing or parenting, e.g. Dr. Spock or Parent Effectiveness Training.

If a child deliberately disobeys or gets into mischief, a majority, 32.1 percent, of mothers would spank. Other disciplinary actions are: isolation of child 28.4 percent, scolding 21.6 percent and talking to child 13.4 percent.

If a child accidentally gets into trouble, as in spilling his drink on the table, 52.2 percent would help the child clean up but 35.8 percent would express displeasure. Only 7.5 percent would spank or scold the child.

The father's likely responses, as reported by mother or both mother and father, were similar, where a child deliberately offended. Fathers were reported to use less isolation, 15.7 percent and more talking out, 20.1 percent.

Fathers appeared less tolerant for accidental happenings: 49.3

percent would help the child clean up but 29.1 percent would express displeasure and 13.4 percent would scold.

These appear as fairly "traditional" and firm parents.

Parents were asked if they found time to sit with the child once a day, or at least 3 times a week; 57.5 percent sat with the child once a day and 30.6 percent three times or more a week i.e. a very high total proportion. However, there were 11.9 percent who seldom sat quietly with the child. There was a very significant relationship (significant at .003 level of probability on chi square) between making time for the child and status of neighbourhood, the parents from lower status neighbourhood finding less time. Interestingly, however, parents from the highest-status neighbourhood also had a lower level of interaction.

When alone with the child, mothers: read a story 55.1 percent, played quietly 20.8 percent or watched T.V. 14 percent of the time. There was no clear significant association with status of neighbourhood, but a strong tendency for lower status families to read less and watch T.V. more.

When alone with the child, 88.1 percent of mothers sing or listen to records together. The association with status of neighbourhood is near significance, favouring the higher status groups as singing and listening together more.

By contrast, when alone with the child, 25.5 percent of fathers read, 21.5 percent go out in the car, 19.5 percent work around the house and 18 percent arrange a special outing.

Fathers claim to be able to be with the child for a quiet time, 82 percent of cases. In 26 cases of the 134, however, there was no record of consistent contact of this kind between father and child.

Activities with the child reflect parental handling and relationship with child; 74.6 percent always take the child to the store and 20.9 percent take him/her sometimes.

In most families, the child is involved in the family activities, particularly mother's: helping with housetask 67.2 percent, cooking and baking 20.1 percent. Working with or helping father 6.7 percent is less frequent, probably due to the father's absence at work.

Organized activities for children are, however, participated in by less than half the families studied, 44 percent. There is a near significant association between participation in organized activities for children and status of neighborhood.

Of these organized activities, 29.9 percent were physical/motor activities such as skating, swimming and gym; 7.5 percent were play groups, 2.2 percent story hour or similar activities and 3 percent "church school". It is clear, therefore that organized activities are perceived as recreational or to stimulate a child's physical/social skills rather than more general development and education. This perception of children's "non school" activities may relate also to the next item.

All families reported a high proportion of 12 categories of toys related to different kinds of learning e.g. motor, letters, creative, etc. (Caldwell checklist). The mean percentage (cases) reporting possession of toys was 86.4 percent. This rated from 98.5 percent for animal toys, crayons, etc., 96 percent children's books to lower percentages, 73 percent, for records and 63.4 percent for musical instruments. The research workers attempted to check on the accuracy of these reports by direct observation.

What is of more interest, in reflecting parents' perception and beliefs about learning, is the reasons given for providing children with toys: asked to give two reasons, 75.4 percent of cases reported the reason was to amuse the child and keep him happy; 20.9 percent to keep him occupied, 45.5 percent to develop skills and ways of thinking, 8.2 percent to develop motor skills and only 2.2 percent to prepare a child for school. This pattern of response suggests that a high proportion of parents do not perceive children's play as related to their learning and education. In this regard, they share the attitudes of the parents reported on by Bernstein and his associates in their study of the connection between parental language, beliefs about education and socio-economic status; in the Bernstein study, lower socio-economic status parents, who tended to use the "restrictive code" in language also tended less to see educational purpose in toys and play, whereas upper socio-economic status parents did see this purpose.

There seems to be a somewhat "traditional" parental pattern, possibly reflected in parental judgments, reported later, on the preferred goals of education.

Parental pattern of control, as well as the individual child's development level, is reflected in the following items on the questionnaire: They suggest encouragement of independence and making decisions by the child: the child is encouraged to dress himself in 94.7 percent of cases, allowed choice of menu in 94.7 percent, allowed to choose brand of food at grocery store in 88 percent and permitted to choose own clothing and to play at a friend's house in 86.5 percent of cases.

One factual item which reflects parents' practices as well as children's choices is that on the child's typical diet at breakfast and lunch time.

Mothers were asked to describe the most recent breakfast and lunch given to the child.

For breakfast, the majority of children had cold cereal alone 42.5 percent, or toast alone, 35.8 percent. Hot or cold cereal with protein account for only 10 percent of breakfasts. On the face of it, this appears to be an inadequate or unbalanced diet.

For lunch, the majority of children had sandwich and soup, 50 percent, or sandwich, 29.9 percent. Only a small minority had a more complete meal. This pattern, if consistent, could be the basis for the older school child's high carbohydrate diet.

CHAPTER 3 – THE CHILD IN THE FAMILY

The data for this discussion were drawn from the interview with parents (Form II), and should be related to the discussion in Chapter 2 and discussion of parental views on day-care and nursery placement and on their child's early school experience.

3.1.0. Pregnancy, Birth and Early Development

There were 12.7 percent of non-normal pregnancies reported, with the main symptoms being toxaemia, 3.7 percent, haemorrhaging, 2.2 percent and "other", 6 percent. There was no significant relationship with early difficulties in settling in school.

There were 7.5 percent of children reported as not full-term pregnancies. Of these, 72.8 percent were 3 to 4 weeks early, 9.1 percent were up to 6 weeks early, and only 1.4 percent more premature than this. This looks as if only a very small proportion are liable to the effects of prematurity.

A significant proportion of mothers claimed that they had not had a normal delivery, 19.4 percent. Of these, 31 percent had forceps delivery, 27.6 had a caesarian section, 10.3 percent had a breech delivery and 31 percent "other" complications.

There was no significant relationship between problems reported at birth, or type of perinatal problems and the first period of school.

3.1.1. Health Difficulties and Illnesses in Early Childhood

A high proportion of children, 28.9 percent, was reported as having some difficulties in the first week of life. Of these, 10 percent were reported as "blue", 33.3 percent as jaundice and 23.3 percent as having difficulties in breathing.

There was no significant relationship between these problems in the first week and problems of settling in school, though there is a suggestion that children who have had respiratory difficulties (possibly having a degree of anoxia) may have more difficulties in their first settling in school.

Just over half - 52 percent of children - had childhood illnesses as recalled by their mothers. Of these, 52 percent had at least 1 childhood illness, 33.3 percent had two, 5.3 percent had three, 5.3 percent had four, and 4.0 percent had seven. No significant relationship was found between childhood illnesses and difficulties in settling in school. The lack of direct relationship between difficulties or illnesses in early childhood and school success, except for extreme or chronic difficulties and handicap, is consistent with previous findings.

3.1.2. Effects on the Child's Development

Only 2.2 percent of children had handicapped siblings, who might have occupied parental attention or otherwise affected the child's early environment.

There were, however, in the last 2 years, for a significant proportion of children, several changes in the family. There was a birth or adoption in 23.3 percent of cases, serious illness in the family in 13.7 percent, death in 9.6 percent and separation or divorce in 6.2 percent of cases.

3.1.3. Relationships Between Children and Parents in Early Childhood

Early relationships between parents and children are known to be related to child-rearing practices, possibly as cause or effect. There is also some evidence for the importance of variation in temperament (and possibly the constitutional basis for this) in early childhood.

Parents were asked to comment on their children's typical response pattern in the first years of life.

Of the total, 38.8 percent were reported as happy, 26.1 percent as easy-going, 6.7 percent as placid. A minority, 17.9 percent, were recalled as active. By contrast, only 1.5 percent were reported as colicky, 1.5 percent as tense and 6 percent as demanding. The general picture is of happy and adaptable children. However, the small minority who were remembered as tense or demanding may have particular difficulties in settling later. There was no significant relationship between settling in the first year of school and these ratings, except that there was a suggestion that the "tense" children had more than average difficulty and the "placid" less than average difficulty in settling.

In total, 71.2 percent of parents recalled a happy relationship with the child and only 3 percent a frustrating, tense relationship. This confirms the previous pattern; there was no significant relationship with settling in school, except for a suggestion that children with a frustrating, tense relationship do less well.

Parents were asked to rate their children on the Chess, Thomas et al categories of temperament, the research worker using short forms of the original questionnaire to specify and guide parental responses.

Activity

There was a bias to perceiving children as active: the majority scored at the median, 45.5 percent; 45.5 percent were active or very active (11.2 percent very active) versus 14.9 percent quiet or very quiet.

Regularity of Rhythm in Functioning

This was a symmetric distribution, 36.6 percent scoring at the median, 27.6 percent regular and 2.2 percent markedly regular. The distribution for irregular and markedly irregular rhythm was much as for regular and very regular. The approximation to a normal distribution may mean that the trait is distributed mainly around the average but is equally likely to mean that parents cannot easily discriminate differences on this characteristic.

Approach-Withdrawal

This dimension assesses the child's confidence in approaching persons as against shyness and withdrawal. The majority of children were perceived as "approaching" in behaviour, very marked approach 14.2 percent, easy approach 36.6 percent, median score 27.6 percent and 20.0 percent withdrawn/retiring.

Adaptability to New and Varied Situations

This is a characteristic which has been found to be related to a child's success at school. This sample of children were judged to be adaptable on the whole: 9 percent very adaptable, 39.6 percent adaptable, 29.9 percent at median vs. 21.6 not very adaptable.

Threshold of Sensitivity

These children were perceived as having low thresholds of response i.e. being sensitive: 6.7 percent had very high sensitivity, 45.5 percent rated high, 39.6 percent were at median level and 14.9 percent were at the low threshold end.

Intensity of Reaction

This had a symmetrical distribution, with 3.7 percent very intense reactions, 24.6 percent rather intense and 39 percent median response; the distribution of low reaction was similar, totalling 30.6 percent of children.

Mood describes the child as variable or equable in mood. Of this sample, 50 percent were seen as of markedly even or even mood, 35 percent at median score level and only 14.1 changeable.

Distractibility by new stimuli or from a task is another characteristic which may be related to school success when the child has the optimum resistance to being distracted. Children were seen as relatively difficult to distract: 41.8 difficult to distract as contrasted with 27.6 easily distracted, 1.5 percent very easily distracted and 27.6 percent at median level.

Persistence is another characteristic which has been found to be related to success at school. The majority of these children were seen as very persistent (11.9 percent) or persistent (52.2 percent) as contrasted with 15.7 percent who were not persistent.

In summary, the parental ratings and reports of early parent-child relationships and of present temperament present the picture of generally happy, acceptable, equable and persistent children. To say the least, this indicates quite positive evaluations of the children by their parents.

3.1.4 Children's Levels of Development

A few items requiring parents to rate children's developmental levels were included in the interview. Despite the fact that 4 and 5 year olds were included, the majority of children passed the criteria for the developmental tasks/skills described. These had been chosen, not to represent an adequate gradient of developmental levels or learning, but as "minimum skills", so this result was partly expected.

Of the total group, 82.7 percent were said to be able to carry messages for mother; 3.7 percent were seen as "too young" and 7.5 percent would need help. In total, only 11.2 percent of the group, therefore, did not meet the criterion for this task.

Of the total group, 70 percent of children were said to like to have money,33.6 percent banked it and 22.4 percent could spend it. Only 7.5 percent simply counted or piled it and 6.7 percent just carried it around. The total of the last two categories is 13.2 percent, which is similar to the 11.2 percent not meeting the previous criterion. This may suggest that some 11 to 14 percent of children in this sample are delayed in development, by reason of age or stage of developmental learning.

References in Chapter 2 to the child going to the store and helping mother around the house suggest that the majority are perceived as being at a high developmental level appropriate to a 5 year old.

There is similar confirmation from the findings in Chapter 2 that children were given and expected to have a fairly high level of independence, self-help skills and opportunity to make choices.

CHAPTER 4 – EXPERIENCE OF DAY CARE AND NURSERY SCHOOLS

4.1.0. Day Care

4.1.1. Organization and staffing

Only 9 children (6.6 per cent) had been in day care, though a substantial part of the sample was drawn from a Metropolitan Toronto borough with a fairly high level of day care.

Of the 9 children, 44.4 per cent had been in day care 1 year, 33.3 per cent for 2 years, 11.1 per cent for 3 years and 11.1 per cent for 4 years.

The median number of children in a day care centre was 30, with a full range from 18 to 99. The interquartile range was 20 to 42.

The median adult/child ratio was 1/7, with a range from 1/5 to 1/10. The most frequent ratios were 1/5 and 1/6 (22.2 per cent each) and 1/10 (33.3 per cent).

The median number of teachers was 3-4, as follows: 3 14.3 per cent, 4 42.9 per cent, 5 14.3 per cent and 6 28.6 per cent.

Parents may or may not be very directly involved as helpers in day care centres. Among 3 centres described, 1 had 1 parent volunteer, 1 had 3 parent volunteers and 1 centre had 6 parent volunteers.

The majority of day care centres were privately owned: 77.8 per cent private, 11.1 public/municipal and 33.3 per cent subsidized.

The numbers were too small to allow for estimates of significant difference between neighbourhoods of different social status, though there was a tendency for higher status neighbourhoods to have a higher proportion of private day care and for lower status to have subsidized day care centres. In the total sample, Kent and Essex had one centre, Hamilton 2, Etobicoke 4 and Nipissing 2.

Over 90 per cent of centres were organized by a director. Fees per week were: median $30, with an interquartile range from $25 to $40 and a full range of $18 to $55.

4.1.2. Parents' perceptions and evaluation

In interpreting the following answers, it may be noted that 44.4 per cent of parents had not spent an hour or more in the day care centres during their contact with it.

Parents were asked to comment on whether they were pleased with day care. All were pleased. Reasons chosen were: staff good 100 per cent of cases, program good 88.9 per cent, equipment good 66.7 per cent and outdoor play good 44.4 per cent. It can be seen that there is probably less satisfaction with equipment and outdoor facilities than with staff and program.

Asked to comment on content of program/materials, parents checked 11 categories. Of these, all were checked in 100 per cent of cases, except for "dressing up play" 88.9 per cent and science activities 77.8 per cent.

Asked to comment on experience of kindergarten as compared with day care, 37.5 per cent of parents considered there was no difference, and 50 per cent considered the child was being more stimulated in kindergarten. This is a very clear vote in favour of kindergarten experience as compared with day care.

4.2.0 Nursery Schools

4.2.1. Organization and Staffing

There were 22 cases who had had experience of nursery school, 16.4 per cent - significantly more than were in day care. Attendance: 57.1 per cent of children had attended nursery school for 1 year, 42.9 per cent had attended for 2 years.

The median number of children in a school was 20 to 21, with an interquartile range from 18 plus to 30 and a full range from 12 to 40. It can be seen that the size of a nursery school tended, in this sample, to be less than that of a day care centre; there were fewer children. Major proportions were 28.6 per cent with 20 children and 14.3 per cent with 30 children.

The median adult-child ratio was also considerably better in nursery school, at 1/3 with a range from 1/2 to 1/4.

The median number of teachers was 2 to 3, with proportions as follows: 1 31.6 per cent, 2 42.1 per cent, 3 21.1 per cent and 4 5.3 per cent. Of 8 respondents, 12.5 per cent reported 1 aide or volunteer in the nursery school attended, 37.5 reported 2 aides and 50 per cent reported 3 aides. It should be recalled that a proportion of the nursery schools recorded were cooperatives, which would automatically have a very high proportion of parent volunteers/aides.

The distribution of ownership of nursery schools differed from that for day care centres.

35.6 per cent were public, 40 per cent private and 20 per cent cooperative, with 4 per cent Montessori. There was a tendency for public and coop nursery schools to be associated with lower-status neighbourhoods and private with higher-status, but there is no significant difference.

Fees received were: median $10, with interquartile range from 8 plus to 12 plus dollars and a full range of 2 to 3 dollars. The highest proportions were $8 (13.6 per cent), $10 (22.7 per cent) and $13 (13.6 per cent).

4.2.2. Parents' Perceptions and Evaluations

The nursery school was judged to be good because of its program (88.7 per cent).

Asked to comment on experience of kindergarten as compared with nursery school, 31.8 per cent considered there was no difference and 50 per cent considered the child was more stimulated in kindergarten.

Another evaluation confirmed this: 23.8 per cent of parents considered the kindergarten program much better than nursery school. 28.6 per cent perceived it as better, and 19 per cent as much the same. Only 14.3 per cent considered that kindergarten experience was not so good and another 14.3 per cent felt they could not make the comparison.

On this evidence, the junior kindergarten/kindergarten receives a very positive endorsement as compared with day care or nursery school - though it should be recalled that this judgment was based on only three months' experience at most, as compared with considerably longer experience of previous placements.

4.3.0. What Do Parents Feel About Need for Preschool Provision?

Replies to the question why the child had not attended a day care centre or nursery school were interesting. These were based on 88 cases: 52.6 per cent were happy to have the child at home; 10.3 per cent felt there were lots of other activities outside school or care; 6.9 per cent considered that the child went to school long enough in any case. All these were positive reasons (69.8 per cent in total). Other responses suggested the parents would have taken advantage of day care or nursery school if available: no school close enough 14.8 per cent, couldn't afford it 6.9 per cent -

so that there was a significant minority (21.7 per cent of parents) in the total sample who would have liked to have had pre-school experience available for their child. Nevertheless, the majority appear to prefer to keep their child at home in the preschool years.

CHAPTER 5 – PARENTS' ATTITUDES TOWARD AND INTEREST IN SCHOOL

5.1.0 Parents' Interest in School

Asked if they were happy about the way the child had settled into school, the majority of mothers felt that the child had settled well, 86.6 per cent. Another 9.7 per cent felt the child had settled, but expressed reservations.

The majority of parents liked the school the child was attending, 78.4 per cent expressed liking, and 15.7 per cent expressed the qualified acceptance of "It's O.K." However, 5.2 per cent had reservations about the school within three months of contact with it.

The child at this age appears positive toward school and open in sharing feelings about it with parents; 62.1 per cent of children told parents a lot about their school day and 27.3 per cent shared some of it with their parents.

A positive connection with school is usually indicated by a child bringing finished work home. Children were reported as doing this by 91.8 per cent of parents. Parents expressed a high level of positive interest: 34.3 per cent said they would sit and look at the work, 60.4 per cent would display it on the wall; 97 parents of 134 reported they had had a chance to visit the school.

The mother had already visited school in 64.9 per cent of cases. This was mainly to an "open house", 34.3 per cent of time, or by invitation of the teacher 18.7 per cent of the time. The contact was likely, therefore, to be a group or "social" encounter with the school rather than individual discussion with teacher.

Of mothers who had contact with schools, 11.9 per cent said they were parent helpers or volunteers in classes, which appeared to be a low proportion. 50 parents (mothers) had not had a chance to visit the school.

The reasons given were: not invited, 50 per cent, can't get away from home, 30 per cent, and only 1 parent felt she would not be comfortable.

58 fathers (43.3 per cent of total sample) had had an opportunity to visit the child's school. These were to an open house, 63.8 per cent, by invitation of teacher, 20.7 per cent and as parent volunteer, 6.9 per cent (half the proportion for mothers).

74 fathers (55.5 per cent of total sample) had not had a chance to visit the school. Of these, 17.9 per cent were not invited, 22.4 per cent could not get away from work, and 7.5 per cent would not feel comfortable. Some 44.8 per cent did not offer reasons.

To the direct question of whether the parent was a volunteer or helper in the child's class, 37 (27.6 per cent) answered yes. So just over a quarter of parents are acting as volunteer helpers in their child's class during the first year at school.

Asked whether they would like an opportunity to be more involved in their child's school, 28.4 per cent said they would, 28.4 per cent said they wished to, but did not have the time, and 14.9 per cent said they had to stay home. In total, some 71.7 per cent would therefore like more contact with the child's school if this were possible. Only 8.2 per cent would feel uncomfortable and only 1 parent felt that parents should not be involved.

5.2.0. Organization and Staffing of School

Parents were asked when children should start school. The majority, 56.7 per cent, wanted children to enter school all together in the fall, but a significant minority, 25.4 per cent, wanted two entries in the year. Only 3.7 per cent felt there should be termly entry, and 10.4 per cent had not considered the question.

The majority of parents felt that school entry should be based on the child's age and ability, 45.5 per cent; on age alone, 29.1 per cent, and on ability/maturity 22.4 per cent. This to some extent contradicts the previous answer, which implies that the child's age or ability are not main factors, if there is only one entry per year.

The item should also be compared to the answers on the effect of difference of a year in age on the child's progress.

There was an even split of answers to the question of how an age difference of 1 year affects children, and this suggests that parents are forming judgments without clear information. Thus, 29.1 per cent felt that a year's difference was to the advantage of the child, 28.4 per cent felt it was to his or her disadvantage and 29.1 per cent felt that the difference was not a problem.

Asked whether children should go to kindergarten full day, half day, or alternate full days, the majority endorsed the traditional view or status quo - 61.9 per cent preferred half day kindergarten; a substantial minority would prefer full days, 24.6 per cent.

However, very few, 8.2 per cent, preferred the compromise of alternate full days - a significant fact for boards of education which have introduced this form of organization or are contemplating it.

It is of interest that a substantial proportion of mothers consider that there should be more men teaching young children - 43.3 per cent. Only 24.6 per cent were opposed to the idea but 23.9 per cent had not thought about it, and 4.5 per cent felt it depended on the person teaching. It is of interest that this issue was raised by the most recent authoritative report on elementary education in England, the "Plowden Report" or "Children and their Primary Schools", Her Majesty's Stationery Office, 1967.

There was a majority in favour of teachers' aides in classrooms as a good idea, 61.2 per cent, and 19.4 per cent felt that use of aides depended on the situation. Only 15.7 per cent were opposed. This degree of endorsement of use of teachers' aides is most significant; it also contrasts with the much lower proportion of parents who are acting as volunteers or aides in their children's classes (see above).

5.3.0. Children's Progress and Evaluation

104 parents, i.e. 82.7 per cent of total expect to receive a progress report on their child. Of these, 61.3 per cent hope to receive both a written report and interview, 13.5 per cent hope to receive an interview and 12.6 per cent would like to receive written comments; 11.7 per cent would like to receive letter grades.

Only 3 parents did not expect or want to receive a progress report, because it was too early to evaluate or likely to make a child aware of competition. There is obviously high expectation for evaluation of progress and possibly a lack of realism in wishing evaluation so early.

Of those parents who had already (within 3 months of the child's entry to school) received a progress report, 32 had had an interview, 10 written comments, 7 both written comments and interview and 7 had received letter grades. Of the 38 parents replying to the question - whether they liked the format of the evaluation of progress they had received, 84.2 per cent of parents said they liked it. Of those not liking the format (8), the majority still preferred written comments and interview.

5.4.0 Parents' Views on Teachers, Program and Goals of Education

Of the total sample, 67.2 per cent of parents were happy with the way the teacher managed the child's class and 15.7 per cent expressed the qualified "O.K." The majority, therefore, were reasonably happy with the teachers' management of class. The remainder consisted of 11.2 per cent who did not know enough to judge and only 5.2 per cent who were outright unhappy. Of the 10 negatives, 4 considered the teacher too strict and 2 too lenient.

By contrast, fewer parents said they liked the program in their child's class; 65.7 per cent liked it, but 19.4 per cent said they did not know much about it and 6.7 per cent didn't know how to judge it. The existence of 26.1 per cent of parents who do not know enough about the program raises questions about the school's effectiveness in communicating what it is doing or about the parents' interests. It also possibly qualifies comparisons made between kindergarten and other programs by parents.

Asked about the age when children should learn to read and write, only 1 parent (0.7 per cent) considered reading and writing were introduced too early; 43.3 per cent felt they were introduced at the right time and 25.4 per cent felt they were introduced too late.

The remainder, 28.4 per cent, felt that the appropriate age for learning to read and write depended on the child. Most of the parents therefore accept the status quo, however they perceive this, but there is a significant minority who appear to favour earlier introduction of the "basic" literary skills, possibly reflecting a "traditional" view of instruction.

Asked what should be taught in the primary grades,and given unlimited choice, parents checked all 9 areas of the curriculum, ranging from moral values to creativity to self-help and the "three R's". The one area with low endorsement was the learning of a second language, 67.9 per cent. All others were checked in 99.2 to 87 per cent of cases.

When required to select only the 3 most important aspects of the program, parents chose: 3 R's, 65.9 per cent of cases, moral values, 56.6 per cent and social skills 56.6 per cent. Other aspects had low ratings. Lowest were Health and Environmental Studies, each selected as important in only 13.2 per cent of cases, and learning a second language, 11.6 per cent. This suggests a rather sad outlook for bilingualism. The pattern of choice suggests that this sample of parents favour traditional views, emphasizing traditional "basic skills" and reinforcement of moral teaching in the home by the school.

CHAPTER 6 – THE HOME BACKGROUND (MAILED INTERVIEW)

Chapters 6 to 9 are based on information gathered by Form I. This was an extensive questionnaire mailed to all parents in the sample, and followed up by a face to face interview of two-thirds of the families using Form II, as described previously.

This mailed questionnaire asked for a variety of information on the physical, demographic and social background of the family such as housing, size and composition of family, parental occupation and education, as well as on the child's health, habits and first contact with school. This basic information supplemented that gathered by Form II. Moreover, some questions were repeated from Form I to Form II to check on the reliability of response. It is assumed that information given in a carefully-structured face to face interview such as that on Form II will normally be more valid and reliable than that from mailed questionnaires completed without this control. It is reassuring to find that, where the same or similar questions were asked, the responses were consistent with one another.

The consistency in response also confirms that the sampling of the 2/3 parents for the face to face interview was random and representative.

6.1.0. Check Items

The questionnaire was answered by the mother, 64.8 per cent, or both parents 25.3 per cent, a pattern closely similar to the face-to-face interview. Father alone answered the questionnaire in 8.3 per cent of cases and guardian in 1 case.

The distribution of children was 55.5 per cent boys, 44.4 per cent girls, as in the sample for Form II.

The family lived in the following neighbourhoods:

suburban, 44.5 per cent, city, 27.5 per cent, rural with neighbours, 12.1 per cent, small town, 11.5 per cent and rural/farm with no close neighbours, 3.8 per cent. This resembles the face-to-face information closely.

Areas sampled were: Kent/Essex, 15.8 per cent, Lincoln, 15.4 per cent, Hamilton, 19.8 per cent, Etobicoke, 25.3 per cent, and North Bay (Nipissing) 23.6 per cent. The heavier sampling of Etobicoke and North Bay reflects the fact that both junior and senior kindergarten children were selected from these areas. The sampling, as noted previously would tend to emphasize the "suburban" and "inner city" representation. However, there is a wide range of environments across Ontario.

The child selected for study currently attended junior kindergarten in 31.9 per cent of cases and kindergarten in 67 per cent. Only 2 children (1.1 per cent) had entered school for the first time in Grade 1.

The child selected for study was attending school half days, 89.6 per cent, full days, 2.1 per cent and alternate half days 2.7 per cent. This distribution is similar to that in the face-to-face interviews, i.e. most children follow the traditional pattern of half day kindergarten attendance. The reader is referred to the parents' views on alternate half days and full day attendance in the previous chapters.

6.2.0. The Family Structure

The status of the family was as follows: two married parents, 90.7 per cent; separated/divorced parent(s), 7.1 per cent; single parent family, 2 (1.1 per cent) and common-law 2 (1.1 per cent).

This appears to be an unusually stable and intact family structure. It seems consistent with the other indicators of stable and possibly conformist patterns which recur throughout this analysis of family characteristics, from both mail questionnaire and face-to-face interview. The occurrence of single-parent families appears slightly above average. One might expect this from the inclusion of "inner city" neighbourhoods and families with a very wide range of socio-economic status; in a recent study which incidentally gathered information on families of Grade 1 and Grade 2 children in South Peel (Mississauga) the incidence of single-parent families was 6 per cent. (Morgan, 1979b)

6.3.0. The Family Background: Personal and Social Characteristics of Parents

6.3.1. The Age of Parents

Mother's age is: 21-30 years, 47.3 per cent; 31-40 years, 44.5 per cent, and over 40 years, 8.2 per cent. This sample represents, therefore, the full child-bearing group, not just the younger age-groups.

Father's age is: 21-30 years, 25.8 per cent; 31-40 years, 58.8 per cent, and over 40 years, 12.6 per cent. This represents the full range of age-groups in families with children of school age. Care must be taken in interpretation, because of the crudity of the categories used and the possibility that ages might cluster at the lower or the upper boundary of a category. However, it would appear that fathers are, in general, older than mothers.

6.3.2. The Socio-Economic Status of parents was estimated by means of occupational level, classified on the Blishen Scale, which ranks occupations in categories covering a range from low (10) to high (60) (unskilled plus or unemployed to managerial/executive). Lower professional categories (e.g. teaching) are found in the 4 category and upper professional, e.g. doctors, university faculty, managers, executives) in 6-7.

Socio-economic status and educational level of parents have both been shown to be related significantly to children's educational progress. Among many references are Douglas, "The Home and School" and the Plowden Report on Primary Education (Children and Their Primary Schools), 1967.

Within the somewhat crude effects of type of neighbourhood, socio-economic status (occupational level) and similar indices, the Plowden Report identified large and significant factors representing (i) parental attitudes to learning and education and (ii) specific parental interest in the child's school and progress.

These two factors were even more important than socio-economic status in predicting the child's response to education and progress and much more important than school building, specific programs, etc. at school. Similar reports from the U.S.A. e.g. aspects of the Coleman Report have demonstrated that socio-economic factors outside the school are highly significant in affecting quality of education.

Indices discussed in this chapter, and measures of parental interest are therefore of considerable importance in the detailed analysis of family/social effects in this report.

The previous occupation of the mother was:

Blishen category	1	2	3	4	5	6	Missing
Per cent	9.3	24.2	23.1	11.5	5.5	0.5	25.8

The present occupation of the father was:

Blishen category	1	2	3	4	5	6	Missing
Per cent	9.9	34.6	28	9.3	9.3	4.4	4.4

An important conclusion is that the full range of socio-economic status in Ontario is represented in the sample. The median occupational level is 2 plus for both parents. (semi-skilled to skilled)

It is of interest to compare the percentages (adjusted for missing data) of mother and father's occupational categories and to compare these with two sources of information. These are Blishen's data on the distribution of his scale in Ontario, 1964 and the distribution of occupations in a recent study of children (4 to 21 years of age) with severe communication disorders carried out across Ontario (Morgan 1979 a pp. 173-174).
There should be a caution about these comparisons. The Blishen data is obviously 15 years old; in the communication disorder study, 70 per cent of the sample did not record parental occupation. Furthermore, information

on parental occupation in the communication disorder study was obtained from teachers who often have incomplete or very approximate information on parental background. There may be differences due to the rounding-off or the re-definition of categories as 1 to 7, instead of 10, 20-29, 30-39, etc.

It is likely that the present sampling of parental occupations is more accurate and valid, since the information is taken directly from parents.

The distributions are:

Present study:

Category	1	2	3	4	5	6	
			Mothers				
Per cent	12.6	32.6	31.1	15.6	7.4	0.7	(adjusted for missing data)
			Fathers				
Per cent	10.3	36.2	29.3	9.8	9.8	4.6	
			Ontario 1964				
Per cent	26		35	20	10	5	
			Morgan 1979a				
Per cent		56.2		31.5		31.5	

From this comparison, it looks as if there is a significantly heavier weighting of the present sample toward the lower end (unskilled-semiskilled) of the distribution of socio-economic status, as compared with higher socio-economic status (professional, managerial, executive).

This distribution may reflect the weighting in this sample of "inner city" and rural neighbourhoods.

Of interest is the marked trend for more fathers to have jobs with both higher occupational status and lower occupational status than the mothers. More mothers ranked in the 'middle categories' (3 & 4) in the Blishen Scale than fathers.

There is a tendency for higher-occupational status fathers to be married to lower-occupation status mothers (as well as the converse). This was a relationship observed in the national sample of families examined by the Gittins Report (Primary Education in Wales) 1967. Or it could simply mean that fathers have had the opportunity to improve their occupational status whereas their wives have remained classified at their original occupational status.

6.3.3. The educational level of parents is as important as occupational and economic status, and is another means of defining socio-economic status.

Indeed, the educational level of the parent may be more directly related to attitude to education and interest in the child's progress than is occupational level. The educational level of the parents was therefore assessed.

The educational level of mother was

Grade 8 or less, 6 per cent; Grade 9-10, 17.8 per cent; Grade 11-12, 42.9 per cent; Grade 13, 9.9 per cent; Trade School 4.4 per cent; Community College, 11.5 per cent; University first degree, 6.1 per cent; Postgraduate (Master's degree or higher) 0.5 per cent.

The father's educational level was:

Grade 8 or less, 9.9 per cent; Grade 9-10, 18.7 per cent; Grade 11-12, 26.4 per cent; Grade 13, 7.1 per cent; Trade School, 8.8 per cent; Community College, 7.7 per cent; University first degree, 13.7 per cent, and postgraduate (Master's degree or higher) 4.4 per cent.

First, it can be concluded that this sample covers the whole range of educational levels in Ontario. The median grade level at which school was completed is 10-11 for mother and 11-12 for father. But it should be noted that there is a significant proportion of parents with minimum educational levels of Grade 8 or under.

Clearly, fathers have a greater range of educational level, being both worse and better educated than mothers, e.g. more fathers with Grade 8 or below, fewer at Grade 11 to 12, and fewer with a Grade 13 diploma, but also twice as many with university first degrees and eight times as many with higher degrees.

This is similar to the conclusions suggested by comparison of occupational status. Again, it is possible that the higher proportion of degree and professional qualifications among fathers may be due to continued opportunities or motivations for study and training as compared with their wives.

6.3.4. Recreational Courses and Further Education

Keeping up or developing interests through recreational or leisure courses is one indicator of parental interest in continued development and education. An even more significant indicator is readiness to undertake further education. Both of these commitments are likely to be related to a positive evaluation of personal development or education by parents, which is likely in turn to lead to more positive attitudes to children's progress and interest in progress, ambitions for the child's achievement or capacity to stimulate the child more effectively.

Of all mothers, 46.7 per cent are taking recreational or similar courses which represent a fairly serious commitment of time. However, 80.8 per cent are not undertaking further education or training. This can be understood in view of the later finding (below) that a high proportion of mothers are working; those who are not working will have heavy commitments on their time from young children.

However, 3.8 per cent of all mothers are following university courses, 4.9 per cent are taking community college courses, and 1.6 per cent are taking trade or business training and 1.6 per cent professional training.

Fewer fathers take recreational courses, 24.7 per cent, as might be expected. But approximately 30 per cent of the total, adjusted for missing responses, are taking some form of further education or training:

4.9 per cent university courses, 6 per cent community college courses, 4.9 per cent professional courses, and 8.2 trade training.

Employment is of interest, since the mother's employment may mean better economic and material conditions for the family but may also mean that the mother is less available for the child and his concerns, including contact with school.

The mother was employed in 35.2 per cent of instances, i.e. over a third of children in this sample have working mothers. However, mothers were on shift work in only 6.6 per cent of cases, so that the child would have a stable expectation of when mother would be available.

The father was employed in 89.6 per cent of cases; the information available is not detailed enough to show whether the unemployed father is temporarily unemployed. Of the total, 28.6 per cent of fathers were on shift work, so that the majority of children should have a stable and consistent expectation of when father would be available.

6.3.5. The Country of Origin of Parents

This factor may relate to the parents' perception of the culture in which the child is being raised, the transmission of their own native culture and language, and may have implications for mobility and change which could affect the child.

The majority of mothers were born in Canada, 75.8 per cent. Adjusted for missing responses, this is 81.2 per cent.

Other mothers came from Northern Europe, 4.9 per cent; Britain, 4.4 per cent; Southern Europe and Eastern Europe, 2.7 per cent each; Asia, 1.6 per cent. U.S.A. and India, 0.5 per cent each.

The majority of fathers were also born in Canada, 74.2 per cent. Adjusted for missing data, this is 81.3 per cent. Other places of origin were: Britain, 5.5 per cent; Eastern Europe, 3.3 per cent; Northern

Europe, 2.7 per cent; Southern Europe, 2.2 per cent; Asia, 1.6 per cent; U.S.A., 1.1 per cent, and India, 0.5 per cent.

Judging from this sample, the "new Canadian" parent is likely to be of European origin (including Britain); the unexpectedly low figure is for parents originating from the U.S.A.

6.3.6. Language

The preferred language of the mother is English in 80.2 per cent of cases and French in 11 per cent, with small percentages for other languages.

The preferred language of the father has a similar pattern: English 78 per cent, French, 9.3 per cent, with small percentages for other languages.

The sample, of course, included an appropriate Francophone contribution.

What is more important than a statement that a language is spoken or preferred, is an estimate of how often it is used.

A language other than English/French is always or often spoken in the home in 12.1 per cent of cases and sometimes spoken in 22 per cent of cases.

However, this language is spoken to the child in the home much of the time, 8.8 per cent, and half the time, 3.3 per cent. It was spoken less than half the time, 3.8 per cent and occasionally, 20.9 per cent. This is "passive" bilingualism.

By contrast, the child speaks a language other than English/French in the home occasionally, 13.7 per cent; less than half the time, 3.3 per cent; half the time, 8.8 per cent; and more than half the time, only 3.8 per cent. Adding the half and more than half the time claimed as spoken adds to 12.6 per cent, which is about the percentage of language which is used in the home by parents. However, it is clear that the child actually uses the language more than half the time in only a small proportion of cases.

This pattern is similar to the pattern of bilingualism in a first (parental) and second (child) generation identified in a large sample of a bilingual population described in the Gittins Report (Primary Education in Wales) H.M.S.O. 1968. It suggests that, unless there are strong cultural reasons or deliberate attempts at teaching the mother tongue of the immigrant, it is likely to be spoken by increasingly fewer, increasingly less, in successive generations.

Responses to language items may with profit be compared with parental response to priorities in school program, previously reported, which showed there was little support for teaching a second language at the kindergarten level.

6.4.0. The Material Background of the Family: Housing and Dwelling

The majority of families live in a detached house, 66.5 per cent; the other forms of accommodation are: high rise apartment, 7.1 per cent; townhouse, 6.6 per cent; semi-detached house, 6 per cent; apartment forming part of a dwelling, 5.5 per cent; farm, 4.4 per cent; duplex, 2.2 per cent; and trailer-home, 0.5 per cent.

The majority of families also own their home, 77.5 per cent; rented accommodation formed 22 per cent and subsidized housing 0.5 per cent.

Therefore, whatever the occupational/educational levels of the families studied and the range of neighbourhoods from which they came, the majority appear on this evidence to be well enough off to own their own detached dwelling. The small percentage in subsidized housing could mean that the really poor families were not aware of this help, or subsidized housing was not available in their area.

The amount of space available to a family reflects their economic level. It also suggests the degree of comfort and the facilities available to them. The median number of rooms per family was between 6 and 7, the biggest proportion (25.3 per cent) having 7 rooms. The range was: 4 rooms, 5.5 per cent; 5 rooms, 13.7 per cent; 6 rooms, 16.5 per cent; 7 rooms, 25.3 per cent; 8 rooms, 19.8 per cent; 9 rooms, 6 per cent; 10 rooms, 6.6 per cent; 11-12 rooms, 3.3 per cent.

The median number of bedrooms was just under 3. The range was: one bedroom, 2.2 per cent; 2 bedrooms, 19.2 per cent; 3 bedrooms, 54.4 per cent; 4 bedrooms, 20.3 per cent; and 5 bedrooms, 3.8 per cent. This appears to be an adequate, if not affluent, level of dwelling.

Central heating is a standard provision in Ontario, 90.7 per cent, but this still leaves 9.3 per cent of families with no central heating.

Availability of his own bedroom and play-space is important for the child. In 53.8 per cent of cases, the child had his own bedroom. Otherwise, the child shares his bedroom with one other child, 42.9 per cent of cases (89.7 per cent of those sharing), 2.7 per cent sharing with more than one child and 2.2 per cent sharing with an adult (probably representing the "one bedroom" situation described above.)

The child has a special place to play or keep toys in 96.1 per cent of cases. There is a special playroom or specific play area in 67.6 per cent of cases.

The home is lived in by the family alone in 91.8 per cent of cases, shared with a relative in 4.4 per cent and with other people 3.3 per cent of cases.

This fact is confirmed by the finding that 89.6 per cent of families did not have relatives living with them - only 1.6 per cent aunt or uncle and only 1 (0.5 per cent) grandparent.

These findings show that the families in this sample consist almost entirely of nuclear families (parents and children).

The general conclusion is that most of the families in the sample follow a "suburban" pattern, nuclear families of two generations living apart from relatives or grandparents in detached residences which are owned, and with an apparently high level of accommodation. There would appear to be a reasonably high level of economic comfort, though this does not, of course, apply to all in the sample.

A related indicator is the fact that 58.2 per cent of families possess one car and 33 per cent possess more than one. Only 8.8 per cent do not have a car.

Parents were asked if they liked their neighbourhood: 23.1 per cent would not move, 46.2 per cent like it (i.e. 69.3 per cent in total very positive) and 22.5 per cent consider it acceptable with a qualified "O.K."

Nevertheless, 8.2 per cent disliked the neighbourhood or would like to move. Among this 8 per cent probably are those with poor accommodation, houses not owned by themselves, unattractive neighbourhoods, who are the less affluent or less economically successful or satisfied. It is of interest that 8 per cent (above) do not possess what is now a required piece of equipment - a car.

Neighbourhoods are related to the nature and quality of the schools; choice of neighbourhood for living opens up the possibility of being able to choose the most appropriate school. Parents are aware of this: 68.7 per cent are aware that the neighbourhood affects the school and those who "don't know" form only 12.6 per cent.

CHAPTER 7 – CHARACTERISTICS OF THE HOME LIKELY TO AFFECT THE CHILD

The literacy of the parents and interest in reading are likely to affect the child's learning. The reading habits of parents, based on evidence from the face to face interview, were discussed above.

7.1.0. Library,Newspapers and Reading of Newspaper/magazines

Of the total, 44.5 percent of families belong to a public library; children only belong in 12.1 percent of cases, mother only in 8.2 percent and father only in 2.2 percent of cases. This leaves a very significant proportion of families - 31.9 percent who do not belong to a public library. Membership of a library does not, of course, mean there is active use of it or extensive reading.

It was noted previously that a high proportion of reading was of newspapers or magazines. Of the total, 36.3 percent of families take a daily and a weekly paper and 33 percent take a daily paper, so that 69.3 percent are likely to be readers of daily papers. In addition, 10.4 percent take a weekly paper only, and 10.4 percent sometimes take papers. This is a pretty high level of readership.

In 13.2 percent of cases, families buy magazines or newspapers in another language than English. This corresponds to the proportion (discussed above) who state that they use another language to a significant degree in the home. The languages are: French 1.1 percent; English (as a second language) 2.7 percent; Greek, Jugoslav or Polish 2.7 percent; Dutch or German 1.6 percent; Spanish or Italian 1.6 percent; and Asiatic language 1.6 percent.

7.1.1. Books and Reading to Children

Of the total, 95.6 percent of families say they buy books especially for children, but only 23.1 percent buy magazines especially for children.

It may be recalled that a high proportion of mothers claimed to be able to find time to be with their children once daily or at least three times a week, and that a high proportion read or told stories to the child. The item relating to reading/telling stories had a highly significant relationship with settling in school.

Parents were asked on Form I if they read stories to their child; 50.3 percent claimed they did so every day, 26.4 once a week and 20.9 percent sometimes. Some 76.9 percent of parents therefore seem to entertain and stimulate their children by reading, but this leaves a significant proportion who do not provide their children with this kind of potentially educative experience. Only half, after all, read regularly to their children.

7.1.2. Major Activities of Families to Entertain and Educate Children

Parents were asked whether their child had been taken to various sources of entertainment or learning over the last year.

Movies: 27.5 percent had never gone; 53.8 percent had gone more than once.

Theatre: 65.4 percent had never gone; 14.8 percent had gone more than once.

Museum: 64.3 percent had never gone; 14.3 percent had gone more than once.

A farmer's market: 35.2 percent of children had never gone; 47.8 percent had gone more than once.

Circus: 48.9 percent had never gone; 12.1 percent had gone more than once.

Boat trip: 29.7 percent of children had never gone; 40.1 percent had gone more than once.

Airport: 32.4 percent of children had never visited; 39 percent had visited more than once.

A shopping mall: Only 3.8 percent of children had never visited; 89 percent had gone more than once.

Concert: 70.9 percent of children had never been to one; only 16.6 percent had been more than once.

Farm: 17.8 percent of children had never visited one, but 58.8 percent had been more than once.

Zoo: 36.8 percent of children had never been; 34.1 percent had been more than once.

A sports event: 35.7 percent had never been; 50 percent had been more than once.

A hike: 34.1 percent had never been on one; 52.2 percent had been more than once.

A train ride: 62.1 percent of children had never experienced this; only 10.4 percent had been on a train more than once.

A bus ride: Most children had ridden on a bus. Only 15.4 percent had never done so, and 67.6 percent had been on a bus more than once.

There is an interesting contrast, for a child of this generation, between the likelihood of having experienced a train ride and that of a bus ride. It also seems strange, in modern society, that as many as 15 percent of children would not have been on a bus during the past year; this perhaps says something about the ubiquity of the car (see above)

Subway: 60.4 percent of children had not ridden the subway, and 30.8 had ridden more than once. This may also relate to the previous question.

Amusement park: Only 20.9 percent had never been to one; 61 percent had been more than once.

Art Gallery: The majority of children, 86.3 percent, had not been to one; only 3.8 percent had been more than once.

The Science Centre: As with an art gallery, the majority of children had never been to the Science Centre, 76.9 percent; 8.2 percent had been more than once.

Places of historical interest: 54.9 percent of children had never been to one; 27.5 percent had been more than once.

Parents were also asked if children had been to a place over 50 miles from home i.e. involving planning a trip. The majority of children had this experience more than once, 79.1 percent; only 4.9 percent had never travelled so far. This, again, may reflect the widespread use of the car.

Parents were asked if the child had visited a city of over 100,000 people; 25.8 percent never had; 54.9 percent had visited more than once.

Reference has been made to the kinds of trips and experiences arranged for the child. On weekends, the majority of families visit relatives (86.8 percent of cases), relax around the house 83 percent, go shopping 75.3 percent, get involved in outdoor activities 63.7 percent,or go for outings in the neighbourhood 53.8 percent. The generally informal, traditional and domestic activities which seem a keynote of other activities of the families in this study can be seen here again.

The two things which the child best likes doing after school are described as: playing outside 68.3 percent of cases, playing indoors with toys 51.7 percent, watching television 41.1 percent; and, minority time interests such as helping the parent around the house 8.9 percent, reading books or comics 6.1 percent, organized activities such as skating, playgroup or lessons in social or intellectual skills 5.6 percent. It will be recalled from previous chapters that on evidence from the face to face interview, organized and overtly educational activities rank fairly low in the family's arrangements for the child's activities.

7.2.0. Television Viewing of Children

The popularity of watching television as a main leisure activity of the child has been noted. It will be recalled that it was parents from lower-status neighbourhoods who reported using their quiet time with the child to watch television.

The parent was asked to estimate the child's television watching in the morning, afternoon and evening. These totals are not necessarily cumulative, since the individual child will usually be at school in the morning or afternoon.

Television watching in the morning was as follows: up to half an hour, 58.2 percent of children; half to one hour 31.3 percent and 2 - 3 hours, as many as 8.8 percent.

Television watching in the afternoon has a potentially different pattern, as more adult and light entertainment programs will be likely to be encountered rather than children's programs or cartoons.

Viewing was as follows: up to half an hour 40.7 percent of children; half to one hour 45.1 percent; 2 - 3 hours as many as 13.2 percent. One child watched for 3 to 4 hours and one for over 4 hours.

Television watching in the evening was: up to half an hour 29.1 percent, half to one hour 49.5 percent and 2 to 3 hours 21.4 percent. The range of time spent watching television may be estimated as from half an hour or less (day and evening) to 6 hours in total, and more for individual children.

However, parents said that they suggested the programs to be viewed, 86.3 percent. This still leaves 13.7 percent of children who apparently receive no guidance on viewing. Programs selected were: children's and light entertainment programs 74.7 percent; children's programs 17.6 percent and "anything" 6 percent.

The programs that were most often watched were specific children's programs such as Sesame Street, Electric Company, Polka Dot Door, and Mr. Rodgers with light entertainment programs such as Walt Disney, Little Rascals, running a close second. Cartoons, situation comedies, and police dramas were also recorded as being watched consistently but not as frequently as the above programs. The impression is that television is for the most part being used for entertainment rather than directed viewing or education, and this would be consistent with the views expressed by a significant proportion of parents, in the face to face interviews, that toys and play were for entertainment and occupation rather than learning, and the emphasis, noted earlier, on domestic and recreational activities for children rather than cultural.

7.2.1. The Pattern of Children's Recreation and Activity

It is certainly true that one is discussing the experiences planned for *young children* (below age 5), and that their maturity and ability to concentrate on or profit from an experience has to be related to the appropriateness of the experiences. Even so, the experiences provided for the majority of children appear to emphasize visiting, shopping or entertainment rather than cultural or educative experiences. Also, parental hobbies/interests strongly tend to follow traditional patterns of domestic occupations, crafts, mechanical pursuits and sports. This finding may also be compared with later observations of the ambitions of parents for their children's academic success (being in the top third in achievement, and being able to have a university education or similar educational level). If realistic, parents concerned with their children's present and future intellectual and cultural development might well plan more educative and cultural activities, read more, etc. There is discrepancy here between parental behaviour and ambitions.

7.3.0. Physical Care of Children

It was noted, in the face to face interview, that children normally ate a breakfast restricted to cereal or toast or both of these and that lunch was normally soup and sandwich or sandwich. Parents were asked on the present questionnaire if the child ate well. Of the total, 67.6 percent saw the child as eating well and 22.5 percent as eating fairly well. A small but significant proportion 9.9 percent were poor eaters. This may reflect the finicky appetites and strong likes/dislikes over food showed by children of 4 to 5 plus, or may indicate a more serious and prolonged faddiness or difficulty over food.

Thus, 81.9 percent of children are reported as eating a variety of foods, but 17.6 percent do not like a variety.

The child usually eats lunch at home, 79.7 percent, but 8.8 percent eat lunch at school, 9.3 percent at a babysitter's and 2.2 percent at a day care centre.

Of the total group, 11.5 percent were reported as getting their own breakfast, but only 3.3. percent got their own lunch.

The "8 percent" which recurs in various contexts throughout this discussion are children who may have to share bedrooms, those families without motor cars, those children who watch a great deal of television, those who do not have many outside recreational or cultural activities; this may or may not be the same membership. However, the occurrence of a group of this kind and size suggests that there may be a minority of families within this sample who are economically or socially deprived or whose attitudes or practices in respect to child-rearing may not be the most effective or beneficial in the light of current beliefs.

CHAPTER 8 – THE CHILD'S CHARACTERISTICS

8.1.0. Characteristics of Children: Family Origin, Birthplace, Family Size

The child being studied was a natural child of the parents in 96.7 per cent of cases, adopted in 2.7 per cent and fostered in 1 case (0.5 per cent).

There were 10, 5.6 per cent children who were native Canadians - Indian or Inuit, so that the sample does contain an appropriate contribution from native peoples.

The great majority of children were native-born Canadian, 93.4 per cent. Small percentages came from: Great Britain, 1.6 per cent, Eastern Europe, 1.1 per cent, and United States, Southern Europe and India in 1 case each (.5 per cent each).

The median number of children in the family is just over 2, the range being: 1, 11.8 per cent; 2, 47.3 per cent; 3, 26.4 per cent; 4, 7.7 per cent; 5, 4.4 per cent; 6 and 7, 0.5 per cent each.

By comparison, estimates of family size in a recent study of Grade 1 and Grade 2 children in South Peel (Mississauga) (Morgan, 1979b) give proportions such as: 1 child, 11-16.8 per cent; 2, 43.6-55.1 per cent; 3, 24.3-25.7 per cent; 4, 8.8 per cent; 5, .7 to 4.0 per cent; 6, 1 per cent. These are closely comparable figures, and the agreement of the two samples identified in quite different ways confirms that the present sample of families is likely to be representative of the distribution in Ontario.

8.2.0. Height, Weight, Medical History and Handicaps

The median height of children (49 cases missing) was 107 centimetres, with an interquartile range from 103 to111 centimetres, and full range from 83 to 120 centimetres. This represents the full range of heights for children of 4 to 5 plus years of age. It illustrates in objective terms the variety and range of the sample.

The median weight of children (45 cases missing) was 18.20 kilograms, with an interquartile range from just below 17 kilograms (16.75) to just above 21 kilograms (21.20). The full range was from 14 to 27 kilograms, i.e. another illustration of the variety and range of physical characteristics in this sample.

The prenatal and perinatal history of the child is discussed in previous chapters, based on evidence from the face to face interview.

Most children were described, in the present questionnaire,as active and healthy during the past 5 years (89.6 per cent) but 18 (9.9 per cent) seemed to have frequent illnesses. The proportion of these is consistent with the information from Form II.

The illnesses were (in proportion to the minute number of children who were sick) minor surgery, 44.4 per cent; minor illnesses and infrequent hospitalization, 33.3 per cent;and major surgery and major illnesses with intensive hospitalization both only 11.1 per cent each.

Of the total, 12 (6.6 per cent) children were reported as having a handicap requiring special treatment.

The kind of handicap (as a proportion of those handicapped) was reported as: speech, 36.4 per cent; physical, 27.3 per cent; learning disability, 18.2 per cent and language delay and sight, both 9.1 per cent each.

However, 16.5 per cent of children were said to have had serious medical problems in the first two years.

The kinds of problems (proportionate to those with problems) were minor illnesses and minor surgery 59.1 per cent; major surgery and minor surgery both 18.2 per cent; and external hospitalization 4.5 per cent.

Weight at birth was recalled as being 5-9 pounds in 86.3 per cent of cases, over 9 pounds in 8.8 per cent. There were 3.8 per cent of children with birthweights below 5 pounds. This is consistent with the conclusion from the evidence on length of term of child, from the face-to-face interview, which suggested that only a very small proportion were potentially low birthweight or premature.

However, the accumulated information on the number of children with low birth weight, difficulties in the first week of life, apparently serious medical problems, tension and difficulty in the first years of life and overt handicap requiring treatment, suggests that there is a significant proportion of children (at least 6 per cent) who have developmental difficulties or handicaps which may affect education.

It may be recalled that study of a large sample of children in England and Wales, the 1958 birth cohort, indicated that 6 per cent of children had already by 7 years of age sufficient difficulties to have received special treatment and that 7 per cent additionally were felt by their teachers to have special needs requiring special educational treatment ("Eleven thousand 7 Year Olds", Kellmer Pringle et al. 1965).

8.3.0. Developmental Levels of Children According to Parents

Retrospective information on children's development is notoriously fallible, but an attempt was made to get parents' assessments of important stages.

Walking: was said to have been accomplished under 12 months in 52.7 per cent of cases, by 12-18 months in 44.5 per cent of cases, but over 18 months in 1.6 per cent of cases.

Talking (first sentence) was recalled as being attained under 2 years, 64.3 per cent; between 2 and 3 years, 28 per cent; between 3 and 3½, 2.7 per cent. It seems unlikely, from present norms, that a well formed sentence such as "Johnny want red truck" would be mastered by a majority of children well under 2 years of age (see Crystal 1976).

The children who did not produce well formed sentences until 3½ (2.7

per cent) are likely to suffer from some language delay, if the facts are correctly reported.

The child being studied was described as playing with one or two friends in 41.2 per cent of cases, with brother or sister in 35.7 per cent, in a group, 10.4 per cent and by himself, 11 per cent. This represents a range of maturity and ability to handle group play which is appropriate to the 4 to 5 plus year groups under study.

8.3.1. Developmental Levels of Children

Parents were asked to assess their child's ability to perform 9 developmental skills appropriate to 4 to 5 year levels such as hopping on one foot, catching a ball, doing up buttons, spreading jam on bread, putting on and tying up shoes and getting a drink without help. Either the children in the sample are advanced developmentally or parents are, possibly, overestimating what children can do or giving them credit for partial successes. However this may be, the majority of children performed well. Of the total,41.8 per cent were reported as being able to do all 9 tasks; 23.6 per cent, 8 of them; 15.9 per cent, 7 tasks; 7.1 per cent, 6 tasks; 4.9 per cent, 5 tasks; 2.7 per cent, 4 tasks; only 1 child who could do only two tasks.

Analyses of individual items show that 97.2 per cent of children can hop on one foot; 97.2 per cent can wash and dry hands; 95.5 per cent can do up the buttons on a shirt; 92.1 per cent can catch a large ball; 91.6 per cent can zip up a jacket; 87.6 per cent can spread jam on bread; 79.2 per cent can pour themselves a drink; 76.4 per cent can put on shoes correctly and as many as 66.9 per cent claim to be able to tie their own shoelaces. This last percentage could comprise the 5-6 year olds in the sample.

If these facts are correct, the majority of children have a good start on the developmental skills required for self-help and entry to school.

8.4.0. Conditions Affecting Children

Children were described as playing mainly in their backyard 68.7 per cent; on the street or sidewalk, 14.3 per cent; in the park, 4.9 per cent; on the apartment lot, 4.4 per cent; in a neighbour's garden, 4.4 per cent. Playing at home appears appropriate to children's developmental level and indicates an appropriate level of interest by parents, as well as existence of a suitable backyard for a fair number of children. On the other hand, a significant proportion of children may not have optimum conditions for play, e.g. street or apartment lot. This item should be compared with the finding (Form II) on face to face interview, that just under a half of families have access to an adventure playground.

Within the house, the majority of children are allowed to play anywhere, 50.5 per cent, 15.3 per cent in the living room, 13.7 per cent in the recreation room and 11.5 per cent in the bedroom.

CHAPTER 9 – CHILDREN IN CARE AND PRESCHOOL EXPERIENCE

A very small proportion of children was identified by the face to face interview as having been in day care; a larger proportion was identified as having been in nursery school. This proportion was the same for Form I, which had a larger number of respondents. The present questionnaire asked more general questions about the child being in care outside the home.

9.1.0. Length of Time in Care of Persons Other than Parents

If the child had been looked after by a person other than the parent(s) for at least two days a week for a period more than 3 months (possibly as a placement, possibly a separation due to hospitalization or other event), the parent was asked to give information.

This care was (while it lasted) for a full week at a time, 22.5 percent of total cases (182), and for part of a week, 16.5 percent of cases. This proportion (39 percent) of children who have been in the care of someone other than their parent appears astonishingly high.

The number of years in care were: less than one year, 13.7 percent of total, 1 - 2 years 9.3 percent, more than 2 years 15.4 percent. These findings also suggest a prolonged period of care as occurring for a significant number of children.

This care was in the child's own home in 20.3 percent of instances and outside it in 19.2 percent. Missing data comprised 60.4 percent of responses.

Care in a relative's or babysitter's home was 26.4 percent of total cases (182); missing data were 62.1 percent.

9.2.0. Children in Day Care

Of the total, 10.4 percent of children were said to have been in a daycare centre at any given time. Missing data are 63.2 percent. This proportion is much higher than the estimate reached directly from the face-to-face interviews as having been in daycare for a significant period of time.

9.2.1. Ages Where a Child is in Care or Babysat

The ages when the child was in day care (32 cases) were: under one year 3.1 percent; 1 to 2 years 6.3 percent; 2 to 3 years 28.1 percent; 3 to 4 years 34.4 percent and 4 to 5 years 28.1 percent. It is probably good that only a small minority of children have to be in daycare below two years of age. The majority of children attend in the immediate preschool years (3 to 5).

9.2.2. Preschool Placements and Activities

The following estimates of preschool placement are distinctly higher than those obtained from the face-to-face interview.

Of 178 children, 19.1 percent are said to have attended a nursery school, and 8.4 percent a daycare centre, whereas 12.9 attended junior kindergarten. The majority of children, 59.6 percent, had not had any preschool experience. The differences in the responses between this marked form and the face-to-face interview could partially be due to the fact that only 2/3rds of the total sample were interviewed.

Before going to school, the child was said to participate in the following activities: play group 31.7 percent, and organized activities such as skating, swimming, dancing 27.5 percent. However, 40.8 percent had no organized activities. The reporting of organized play group activities appears to be higher than that shown in the face-to-face interviews as compared with physical activities such as swimming, skating, etc. However, the high proportion of "no organized activities" in the preschool years is consistent with the previous estimates of preschool educational and leisure activities for children reported in the face-to-face interviews.

CHAPTER 10 – THE CHILD AND THE SCHOOL; PARENTAL PERCEPTIONS AND INTEREST AND AMBITIONS

10.1.0. Siblings in School

Familiarity with a school or having a sibling in the same school can be a factor in helping the child settle. Asked if any other child from the family was also going to the same school, 40.1 percent of parents said one other went; 11 percent reported that two or more went. Clearly this indicates that the family has remained in the neighbourhood for a number of years, a strong element of stability. The next item suggests, however, that the two or more siblings who attend the same school must both be within the primary and junior age range, since the answer to the question "have you had any other children who attended the same school?" was: one child 19.2 percent and two or more only 9.9 percent.

10.1.1. The Journey to School

In general, it would appear better for a child to remain within his own neighbourhood and know the children there, as would be implied by the fact that he can walk to school - unless, of course, the neighbourhood is undesirable. (See the Gittins Report "Primary Education in Wales, 1968, Chapter 7 on the education of young children and the desirable length of journey to school.) It is found that 58.2 percent of the children walk to school, 33.5 percent go by bus, only one child had to go by public transport, and 7.1 percent were driven by parent or neighbour.

For those travelling by bus the trip is under 10 minutes in 35.9 percent, 10 - 20 minutes in 48.2 percent and over 20 minutes in 21.9 percent of the cases.

10.2.0. Health and Developmental Checks

In view of the importance of checking on the child's developmental level and readiness for school and detecting possible difficulties and disabilities, an early check on basic factors of sight, hearing and health appear important.

At the kindergarten registration in the preceding spring, the child had had a health examination in 74.7 percent of cases, a sight examination in 47.9 percent, hearing test in 47.9 percent and test by the teacher in 21.2 percent. It is of interest that 24 parents, 7.7 percent "did not know" whether their child had had any such tests.

10.3.0. Arrangements for Entry to School

A graded entry to school with shortened days or staggered attendance by different groups has been considered valuable by an authoritative section of opinion on early childhood education (see again Gittins Report, Primary Education in Wales 1968, Plowden Report, Children and Their Primary Schools, 1967).

Of the total, 61 percent began school by attending a normal session, but a substantial proportion, 34.6 percent, attended a shortened session. Part of this last group may, of course, have been the 30 percent of junior kindergarten children.

The whole class began school on the same day in 41.8 percent of cases; the whole class did not begin on the same day in 51.1 percent of cases.

The vast majority of parents profess to be satisfied with the arrangements for the child to enter school, 84.8 percent.

Only 7.6 percent would have preferred a better introduction in Spring, and 3.8 percent felt that the mother should be encouraged to stay the first day. Only 2 parents felt that the child should have attended a summer program before beginning school and one would have preferred a gradual introduction in the Fall.

10.4.0. Contact Between Parents and School

An opportunity to visit the school or talk to teachers before the child's entry indicates an interest on the part of the parent and a positive attitude by the school.

In 64.2 percent of cases the parent had a chance to talk to the teacher and in 47.5 percent to talk to the principal, before the child started school. This leaves a substantial proportion who did not do so.

On the other hand, 66.7 percent of parents said there was an opportunity to visit the school before the child started and 17.4 percent reported there could be a special arrangement for visit by parents. This leaves a small but significant proportion, 15.9 who checked "no (opportunity) that I know of".

Distinctly less positive, as far as the school appears to be concerned, was the finding that only 37.4 percent of parents said they had been encouraged to attend school with their child on the first day, and 58.8 percent had not.

Of those encouraged to attend, 75.3 percent had done so, and 6.2 percent said that they had not been able but presumably wished to, i.e. 81.5 percent of those encouraged. This proportion may also apply to the parents who were not encouraged to attend, which suggests that many parents would like to attend school with their child the first day but feel they cannot do so.

On the other hand, there is a very positive attitude to the school's willingness to see parents: "Do you feel free to contact school on any matter?" Practically all parents, 98.9 percent, answered yes. This is a significantly larger proportion than the proportion of schools (in the following chapters recording the principal's views) which are ready to see parents at any time without qualification.

10.5.0 Parental Ambitions: Geese and Swans

The following items measure parents' interests and ambitions in the child's success. Asked what they hoped their child would do after high school, 65.9 percent wished he/she would get further training in the field of his/her choice, 24.2 percent hope the child will go to university, but only 2.7 percent hope he will learn a trade, and 1.1 percent that the child will go to community college. Only 1 parent simply hoped the child would get a job.

Only 18.8 percent of the fathers have gone or are going to university, and the general occupational and educational level of the parents also make it unlikely that anything like a quarter of the children will go to university. In relation to occupational and educational level of parent, it is more likely that a substantial proportion of children are likely to learn a trade. On general assumptions of ability and motivation, a higher proportion are likely to go to a community college than to university. One must conclude that there is a considerable ambition for the child's success at this early stage but a lack of realism in parents.

The final item also measures parental ambitions.

Asked if the child was expected to be in the top third of the class, 41.8 percent of parents expected this; by contrast, 24.2 percent expected their child to be in the middle third and only 1.1 percent could accept the possibility that the child would be on the lower third. Yet purely on statistical grounds, on any ranking of ability and achievement, 33 percent of children would be expected to be in each third of the class. This again means that parents have considerable ambition for their child and a high proportion obviously expect the child to do much better, in relation to others, than he in fact will. This is clearly unrealistic. This might well be named the "all geese are swans" question.

On the other hand, a healthy 15.4 percent do consider that this ranking does not matter, 8.8 percent are realistic and said they didn't know and 8.8 percent did not answer this question.

The over-estimation of children's abilities or relative achievement suggests that, in judgments of the child's progress and developmental levels, parents may also over-estimate.

What is of concern is not the natural ambition of parents for children and their strong desire that children should do well - and probably better than their parents - it is the fact that, because of the occupational and educational level of the parents, a substantial proportion of children are not likely to do as well academically as others.

Other evidence, previously examined, suggests that a substantial proportion of parents do not clearly perceive the educational importance of early stimulation and play, and that a substantial proportion do not offer their children the organized preschool experiences, the story-telling and consistent reading, and the access to cultural and educative as well as recreational experiences which are likely to help the child to lay a good foundation for early development and effective response to school. The contrast between ambition and hope and what appears to be actual practice is a rather sad one.

SUMMARY: PART I

All parents (182) were asked to complete and return a mailed questionnaire and a sample of two-thirds (134) were asked for a face-to-face interview.

There is a very considerable variety and range of parental socio-economic status and educational level (unskilled to university) though the median occupational level was Blishen category 2 (skilled occupations) and median educational level was Grade 11.

The sample was drawn from a variety of neighbourhoods - city, inner city, suburban, small town and rural; it appears to represent the variety of neighbourhoods in Ontario. The status of neighbourhoods, as rated by the research team, also varied considerably, though most neighbourhoods and dwellings had an acceptable and often high level of amenities, and the majority had reasonable access to parks, shopping, public libraries, movies and sports facilities but about half had access to adventure playgrounds.

There was a high level of ownership (three quarters of families) of detached dwellings. Families in general had adequate or even ample living space; most children did not have to share a bedroom or did so only with a sib. However, a proportion of as high as 8 per cent may have not had the economic and social advantages of other families.

The typical family is stable (low proportions of divorced or single parent families), a nuclear family with a median of just over two children and a spread from one to six children with no grandparents and few relatives living with them. Fathers are of better occupational and educational level than mothers; about a third of mothers are working. However, a minority of both parents work shifts, and both claim to be able to see the child regularly.

Three quarters of parents are Canadian-born and the remainder come from all parts of Europe, Britain, with very small representation from U.S.A., Asia or India. Some 11 per cent are Francophone; about 13 per cent speak another language for preference in the home and buy newspapers or magazines in other languages than English/French.

The majority of children were born in Canada; a distinctly lower proportion than their parents speak the parental language consistently in the home.

The pattern of house ownership, reading habits, hobbies and interests, taking of recreational courses or further educational and training, and in particular the attitudes of parents towards children's education and progress all strongly delineate a "suburban" or "middle class" style of life, relatively affluent and likely to have strongly traditional and conformist attitudes.

Just under a half of mothers are members of public libraries, but reading habits emphasize newspapers, magazines, domestic interests and light fiction rather than non-fiction or literature.

There is a concern for education and ambitions for the progress of the child which is high and even unrealistic in many instances, but found together with a limited commitment to organized preschool educational activities or giving the child access consistently to the kinds of cultural and educative experiences which can stimulate his development. Play and toys are mainly perceived as for amusement and occupation, despite the adequate or complete provision of all types of play equipment in the home. Parents wish the school to provide the whole range of curriculum but there is little support for teaching a second language. A high proportion of parents emphasize the "3 R's", moral teaching and social skills as the preferred goals of early education.

Children mainly have access to a range of adequate play facilities, including their own backlot and house; a significant proportion have their own playroom or play space. Nevertheless, a significant minority play in the high-rise lot or street. Play and after-school or weekend occupations are mainly in and around the home, and reflect the domestic and traditional leisure interests of parents. Television viewing was guided by parents in the majority of instances and appears to be relatively restricted, but the range could still be from half an hour to 6 hours a day and evening, with some 10 to 13 per cent at the upper limit.

The journey to school was relatively short, up to 20 minutes, in most instances, but a third of children made the journey in a school bus.

Health checks were made at registration for kindergarten in three quarters of cases but sight and hearing checks in just under half, and review of development by teacher in only a minority of cases.

Children cover a wide range of height and weight, from dwarf to tall. The majority are reported by parents as having developmental levels, on motor and social or self-help skills, which are appropriate to 5 year olds. A small but significant proportion of mothers suffered from a disturbed pregnancy and about twice that number claimed a difficult birth; a significant proportion of children had birthweights below 6 pounds or were delayed in birth by from three to six weeks, but only 2-3 per cent appear to be liable to prematurity.

A small proportion of children had severe difficulties in the first week of life; nearly a fifth had significant medical difficulties in the first 4 to 5 years, and 6 per cent had definite handicaps requiring treatment. A majority of children were perceived by parents as being active in early childhood, but also equable, with regular rhythm, not particularly intense or lacking intensity, and tending not to be distractible, but to be persistent. The majority of children were said to have been happy and acceptable, but a small minority were recalled as tense or demanding. There appeared to be no significant relationships between health factors and settling in school.

A majority of parents claimed to find time for a quiet period with the child daily or up to three times weekly, and a significant proportion read or told stories to the child. However, a significant proportion of parents did not read consistently. There is a significant relationship between status of neighbourhood and commitment to reading to the child.

Estimates of attendance at day care centres and nursery schools vary from face-to-face interview to mailed interview and within questions, but a minority (at most 20 per cent) had placed the child at some time in a nursery school and 10 per cent (or less) in a day care centre. However, a significant proportion of parents had used care by relatives or babysitters for children from 1 year of age (in small proportions). The majority of care occurred at the 3-4 year level. Day care centres were mainly privately owned, could range in size up to 100 children and had a median staff-child ratio of 1/7, whereas nursery schools were more often publicly owned, were up to 30 children in number and had a median staff-child ratio of 1/3. The majority of parents preferred to keep their children at home, because they thought this was best for them or school was long enough. Kindergarten programs were perceived as being definitely more stimulating than nursery or day care programs.

The diet for children at breakfast, with its emphasis on cold cereal and toast, raised questions about adequacy. As many as 11 per cent of children got their own breakfast.

Parental attitudes to school and readiness to visit were mainly positive. There was general acceptance of arrangements for entry of child to school (2/3 or above positive attitudes). The impression was gained in interview that parents might have reservations, but did not want to acknowledge any criticism of school. Three quarters of parents expressed the desire to be more involved in schools as volunteers. Comparisons with the school's perception in terms of readiness to see parents and use volunteers was much the same, but with more qualifications, as well as reference to the fact that only a minority of parents attended parent-teacher association meetings. The main early contact of parents with school was through an open house rather than individual contact with teacher. Fathers also professed interest in visiting but were less able to do so. There was preference for traditional modes of organizing children in half-day kindergarten rather than alternative half days, which was disliked, or full days which was seldom found. Parents showed interest in evaluation of the child's progress; a significant proportion, but not all had already received a progress report in the first three months. The emphasis on formal or academic progress may be reflected in the parental desire for both written reports and interviews.

Parents reported satisfaction in a majority of cases with arrangements for pre-school registration and arrangements for entry to school. The majority preferred the traditional one entry in September.

About a third of the schools provided some form of staggered entry (i.e. not the whole of the class entering at one time or on the same day) but the majority of schools followed traditional patterns. Just over 60 per cent of parents were able to meet the teacher and just over 40 per cent the principal before the child entered school; about a third were able to come to school and stay with the child on the first day, but the majority appeared to feel they would like this.

Ambitions for the child were high, and to a degree, unrealistic, a quarter of parents hoping for eventual entry by child to university, though only a small proportion of parents had had university education. In a question asking parents to estimate in which third of the achievement/ability ranking they anticipated their child would be, only one per cent estimated the child would be in the lowest third.

PART II

THE CHILD IN THE SCHOOL

CHAPTER 11 – THE ORGANIZATION AND STAFFING OF THE SCHOOL, AND RELATIONSHIP TO THE COMMUNITY

Responses to the principal's questionnaire (Form 3) set the scene in terms of the organization and staffing of the schools in the sample, and their relationship to parents and community.

The total sample was 44 schools.

11.1.0 Neighbourhood, Size and Staffing of Schools

The neighbourhood in which the school is situated is: suburban 43.2 percent, inner city 25 percent, village/town 18.2 percent, and rural 13.6 percent. This corresponds to the distribution of home neighbourhoods in Chapter 2 and reflects the sampling from a variety of backgrounds.

The size of the school varied from under 250 to over 600 students, as follows: up to 250, 31.8 percent; 251 - 400, 31.8 percent; 401 to 600, 29.5 percent, and over 600, 6.8 percent.

This appears to be the full range of sizes of most elementary schools in the province; the distribution corresponds to the full range of size of school in differing neighbourhoods in the sample.

The number of teachers in each school was as follows: up to 10, 36.4 percent; 11 - 15, 18.2 percent; 16 - 20, 15.9 percent; 21 - 25, 20.5 percent, and 26 or more, 9.1 percent. This range of staff size obviously corresponds to the range of school sizes.

The composition of classes is determined by: grade, 29.5 percent, or grade and ability, 70.5 percent.

11.2.0 Composition of Junior Kindergarten and Kindergarten Classes

Of the total sample, 40.9 percent of schools had no junior kindergarten class, 30.5 percent had one class, 4.5 percent had 3 such classes and 2.3 had 4 classes.

Thus, the majority of schools had 1 or 2 kindergarten classes at most.

Of the total, 31.8 percent had one kindergarten class, 38.6 percent had 2 such classes, 20.5 percent had 3 and only 6.8 percent had 4. The median number lay between 1 and 2 classes per school which had them.

The range for Grade 1 classes was closely similar to the above: 36.4 percent of schools with one class, 36.4 percent with 2, 15.9 percent with 3 and 6.8 with 4 classes.

The number of teachers available for junior kindergarten classes, in a school where they existed, was: 68.2 percent with one teacher and 22.7 percent with two teachers, of all junior kindergartens in the sample. Clearly most schools have only one such class, if it exists.

The number of teachers in a school teaching kindergarten classes was: one teacher 61.4 percent, two teachers 31.8 percent, three teachers 6.8 percent. This distribution reflects the fact that there are more kindergarten classes than junior kindergartens and that there are usually more per school.

The number of teachers in Grade 1 was closely similar to those in kindergarten: one grade 1 teacher 43.2 percent; two such teachers 36.4 percent, three 11.4 percent and four 2.3 percent.

All junior kindergartens appeared to be half day.

Among kindergartens, only 13.6 were full day, 6.8 percent were alternate full day and the majority (75 percent) were half day. The proportion of alternate full day provision corresponds to the parental estimates (Chapter 2.)

11.3.0. The Organization of Schools

The majority of schools were organized in self-contained classes, 85 percent. Only 8 schools claimed to be "open-concept". In 5 of these, the "open concept" organization was based on the architecture of the school. If this sample is representative, the "open plan" arrangement is a very small proportion of Ontario elementary schools.

In 50 percent of the 8 "open" schools, junior kindergarten and kindergarten classes were organized as separate, enclosed classes.

More precisely, schools were organized as: self-contained classrooms 67.2 percent, shared classrooms 18 percent and open-concept 9.8 percent.

Open concept or shared classrooms were found mainly in suburban areas (7 and 4 respectively) and to a lesser extent in inner city areas (2 and 2 respectively) but these may represent sampling from two major city areas.

Of the kindergarten classes not in self-contained classroom (3), all had shared (open) space and 2 had shared teachers.

In the 6 schools detailing open-concept operation, 5 (83.3 percent) of classes shared facilities, 4 (66.7 percent) remained with one teacher, 3 (50 percent) had groups of children moving together within a shared space.

In the 13 schools replying to this item, team teaching was claimed to exist in 46.2 percent in the whole school, 30.8 percent of Grade 1 classes, 15.4 percent of kindergarten and 1.7 percent of junior kindergarten. Thus, even in schools with alternative methods of organizing staff and teaching, this did not generally extend to the kindergarten.

In the 17 schools replying, 68.4 percent had rotary teaching, and this was found in Grade 1 in 21.1 percent of cases and in junior kindergarten, most unexpectedly, in 2 (10.5 percent) of cases and 68.4 percent in the rest of the school.

In the 25 schools replying, 54.1 percent had specialist teachers, and in 18.9 percent of the cases in Grade 1. There was a surprisingly high proportion of specialist teachers in kindergarten in these schools, 24.3 percent, and even 1 case claimed this for junior kindergarten.

11.4.0. Continuity of Program

Continuity of program, from junior kindergarten to kindergarten was achieved in the 20 schools responding as follows: The following methods were used, informal means 90 percent of cases, transfer of records 90 percent, formal discussions 60 percent, by a curriculum program planning group 60 percent.

Continuity of program between kindergarten and grade 1 was achieved in the 44 schools responding. The methods used were: by informal discussion, 97.7 percent of cases, transfer of records 83.1 percent, formal discussion, 70.5 percent and curriculum planning group 45.5 percent.

The arrangements appear similar for both junior kindergarten and kindergarten, being mainly informal, but with rather more formal discussions in transfer from kindergarten to kindergarten but rather less discussion of curriculum planning.

The principal is the person mainly involved in arrangements for continuity, apart from the teachers. Arrangements are as follows: principal participates 95.5 percent of cases, vice principal 43.2 percent and consultant in 36.4 percent. The superintendent is involved in 20.5 percent of cases.

11.5.0. Problems Among Children in Schools

The presence of a significant number of new Canadian children may present difficulties to a school in terms of language teaching and possibly preparing children for particular forms of learning. The number of schools with a high proportion of new Canadian children was 2 (4.5 percent) and with a significant proportion 7 (15.9 percent).

The majority of schools, 79.5 percent, had low proportions. This was in spite of the inclusion of a substantial sample of "inner city" schools both from Hamilton and Etobicoke.

However, children with special problems in development or learning were reported by 19 (43.2 percent) schools. Sixteen schools (36.4 percent) claimed to have a program to meet the needs of children with special problems.

There was no significant relationship between the item "school has children with special needs" and the proportion of new Canadians, so in general, new Canadian children are not perceived as having special needs or problems.

There was, however, a near-significant relationship (chi square probability .06) between proportions of new Canadians and locality, the highest proportion of schools with new Canadians being in a Metro Toronto borough, Etobicoke.

There was a significant relationship (chi square significant at .02 level) between proportion of schools with new Canadians and type of neighbourhood, with the highest proportion being found in inner city neighbourhoods.

11.6.0. Staff Organization and Responsibilities

Staff meetings were reported as held: once a week 2.3 percent of schools; twice a month 27.3 percent; monthly 50 percent; once a term

2.3 percent and when needed 18.2 percent. Thus, the majority of staff meetings are once a month or less frequently, at need.

The purpose of staff meetings was perceived as being: administration 100 percent, new curriculum ideas 90.9 percent, curriculum 81.8 percent, followed by liaison with parents 72.7 percent, planning special days 65.9 percent, reviewing organization 52.3 percent, selection of purchasing books and materials 47.7 percent, reviewing children's records 31.8 percent and discussing individual pupils 22.7 percent.

Topics considered most important in staff meetings were: administration 64.7 percent and new curriculum ideas 64.7 percent or discussion of school curriculum 32.4 percent. All other choices were very low, including liaison with parent, 11.8 percent.

The least important topics were perceived as: discussing individual children 51.4 percent, reviewing children's records 45.7 percent, reviewing organization 28.6 percent and selection of purchasing books and materials 28.6 percent. Most principals felt that staff meetings are not an appropriate place to review records.

Junior kindergarten and kindergarten teachers participate in formal staff meetings of the whole school in 97.7 percent of cases, informal staff meetings 47.7 percent of cases and in their own small groups in 72.7 percent. They therefore appear to be viewed as part of the whole staff but also having special needs.

The principal was asked to assess his priorities in terms of responsibilities or functions. They were as follows: administration of school 100 percent, liaison between parent and school 86.4 percent, organizing and encouraging professional development 86.4 percent, counselling teaching staff 84.1 percent, developing new curriculum ideas 70.5 percent, teaching 61.4 percent, supervising teachers 59.1 percent, evaluating teaching staff for the board 54.5 percent, liaison between principal and child 40.9 percent, liaison between teacher and child 34.1 percent, liaison between board officials and school 34.1 percent.

The two most important functions of the principal were seen as: counselling teaching staff 51.2 percent, administration 44.2 percent, liaison between parent and school 12.9 percent, and encouraging professional development 20.9 percent. Other percentages varied from 14.3 to 2.3. The two least important functions of the principal were seen as liaison between board officials and school 53.7 percent; evaluating teaching staff on behalf of the board 36.6 percent; teaching 24.4 percent and developing new curriculum ideas.

The principals therefore perceived their most important roles as counselling staff, administration, liaison with parents and professional development rather than their supervisory or evaluative functions.

Important educational decisions such as purchasing major equipment, books and teaching materials were perceived as mainly shared between principal and teacher.

Purchasing major equipment was the responsibility of principal and teacher in 71.7 percent of cases, of principal and vice-principal in 18.9 percent,and of teacher alone in 5.7 percent. Purchase of books had a similar pattern but with more class-teacher involvement: purchase by principals and teacher 71.7 percent of cases, class teacher 17 percent, principal and vice-principal 7.5 percent. Teaching materials were purchased by principal and teacher 66.7 percent of cases, by class teacher 29.4 percent, and principal and vice principal 3.9 percent.

However, this pattern of responsibility for purchasing did not necessarily extend fully to the primary grades. Purchase of major equipment on the above pattern was also characteristic of 37.8 percent of Grade 1 and 41.8 percent of kindergarten but only 20.4 percent of junior kindergarten. Purchase of books followed a similar trend. Grade 1 followed the main pattern in 39.4 percent of cases, kindergarten did in 40.4 percent of cases, but junior kindergarten in 20.2 percent of cases. The same trend was found for selection of teaching materials: Grade 1 followed the main purchasing pattern in 38.1 percent of cases, kindergarten in 41.9 percent and junior kindergarten in 20 percent.

11.7.0. Liaison with Parents, Use of Volunteers and Parent-Teacher Associations

11.7.1. Volunteers and Parent Liaison

The principal was asked if he encouraged parent volunteers. This was claimed to be so in 70.5 percent of cases and with reservations in 22.7 percent of cases.

The school used resource persons from the community regularly in 11.4 percent of instances and used them depending on need 38.6 percent of time and depending on availability 27.3 percent of time. The proportion of schools claiming to encourage parent volunteers corresponds to the proportion of parents claiming to be interested in serving as volunteers (Chapter 2), so there should be a better match between these two aspects. The proportion of persons regularly being used as resources corresponds to the proportion reporting regular contact with the school as parent volunteers in the first three months of the child's attendance.

These are the grades in classes in which volunteers are mainly used: Grades 1 and 2, 55.3 percent of cases, kindergarten 47.4 percent, Grade 3 - 4, 39.5 percent, Grades 5 - 6, 13.2 percent and Grades 7 - 8, 2.6 percent. Average proportion for all levels was 39.5 percent.

The trend to decreasing use of volunteers with age level of class is quite clear. It is very strange, however, to find that only in 7 (18.4 percent of cases) were volunteers reported in junior kindergarten classes.

Duties of volunteers were seen as: field trips 97.7 percent of cases, individual assistance to children 83.7 percent, helping in the library 76.7 percent, relieving teachers of non-teaching chores 39.5 percent, responsibilities for an enrichment program 37.2 percent and lunch duty 16.3 percent. On the whole, therefore, volunteers were perceived as having significant support and instructional roles.

There was no significant relationship between number of volunteers in the school and the neighbourhood (rural, suburban, inner-city, village/town) though there was a higher proportion in suburban and inner city areas.

The presence of parents in the school was believed to improve school/home liaison by 68.2 percent of principals and to improve liaison somewhat by 27.3 percent.

Visiting of the home by principal or teacher was strictly limited: 36.4 percent of principals preferred to call a social worker to visit the home; 59.1 percent referred to "occasional" home visits.

Special events held by the school to encourage parents to attend are another index of home-school relationships. Special events during school hours were reported as being held several times a year by 81.8 percent of schools, once a term by 6.8 percent and once a year by 2.3 percent.

"Open House" was typically held once a term - 61.4 percent of schools, but a significant minority - 22.7 percent - claimed this occurred several times a year. As many as 13.6 percent of schools held this event only once a year. It may be recalled from Chapter 2 that the main contact parents reported with their new school in the first three months was through an open house.

Other school events take place: several times a year, 61.4 percent of schools; once a term 22.7 percent and once a year, 4.5 percent.

The principal reported that parents were encouraged to participate in the life of the school as follows: to drop in and see the school 90.9 percent of cases, seeing teachers at a time agreed by both 90.9 percent, teachers calling up parents to discuss 88.6 percent. As noted in a previous direct question(above), home visiting by teachers is not perceived as an important or frequent commitment - 16 cases or 36.4 percent of schools.

11.7.2. Parent-Teacher Associations

There was a formal parent-teacher association in 18 (40.9 percent) schools. It was viewed as effective, with qualifications, by another 45 percent. It was viewed as of limited value by only 4.5 percent.

Parent-teacher associations met usually once every month or two months: 35.3 met once a month, 41.2 once in two months and 23.5 percent 2 to 3 times a year. One must wonder about the function and effectiveness of this last group.

The number of families attending parent-teacher associations was estimated as: a small minority 52.6 percent; under half of the families with children at school, 36.8 percent and about half 10.5 percent. Clearly, Parent-Teacher Associations are seen as commitments by a minority of parents. This is not unexpected, but does raise issues about their function and effectiveness in representing the parents with children at a school.

The form of P.T.A. meetings was as follows: (18 cases) discussion of school issues 88.9 percent of cases, presentations by principal and staff 83.3 percent, outside speakers 66.7 percent, panel discussion 61.1 percent, discussion of curriculum 61.1 percent, discussion of changes in teaching method 50 percent, discussion on developing parent-teacher liaison or community relationships 44.4 percent, working parties 33.3 percent.

Discussion of school issues and presentations by principal and staff or outside speakers appear to be more important than discussion of changes in teaching method, of liaison and community relationships or joint working parties on specific issues involving both parents and teachers. A majority of the schools without parent-teacher associations (23) claimed to have an alternative form of association, 73.9 percent. These were perceived as effective in 60 percent of cases and of limited effectiveness in 33.3 percent.

It is of interest to compare these findings on parent-school relationships with the findings of the "Plowden Report" on elementary education of some 12 years ago, which attached considerable importance to investigating parent-school relationships; the recommendations of the Hall Dennis Report; and the related investigations by Hedges of the contribution of the volunteer/aide in the elementary school classroom.

There was no significant relationship between existence of P.T.A. in school and school neighbourhood, but there were proportionately fewer in suburban and inner city areas, especially the latter.

11.8.0. The Philosophy and Program of the School

Principals perceived their school as having a shared general philosophy of education in 70.5 percent of cases, and as having an integrated program in 18.2 percent. In only 9.1 percent of cases were teachers said to pursue their individual programs. Observation of the schools suggests that the existence of a general philosophy of education or an integrated program involving all or most staff was not usually a clearly definable or highly visible feature.

The philosophy or general program was said to extend to the junior kindergarten classes and to kindergarten classes in 95 percent of cases and to Grade 1 in 100 percent.

There was no significant relationship between existence of a school philosophy or integrated program, and pupil number, or number of staff in school.

CHAPTER 12 – CHILDREN IN SCHOOL: TEACHERS' ASSESSMENTS AND TESTS

The data are based on Form V of the study. Comparisons are mainly between senior and junior kindergarten groups, based on the frequencies adjusted for missing data.

12.1.0. Teachers' Assessments of Developmental Level

This section deals with teachers' assessments and tests of children's response to school.

12.1.1 Response to school: teachers' observations: health, absence

The teacher was asked to check observations of the child's general health. Of the senior kindergarten group (131) 93.1 percent had good health and of the junior kindergarten group (58) 84.5 percent had good health. Of the senior kindergarten group 5.4 percent and of the junior kindergarten group 13.8 percent were reported as having frequent illnesses.

Among the senior kindergarten group 1.5 percent and among the junior kindergarten group 1.7 percent had a specific handicap.

The estimate of health can be compared with the parents' estimates of health, preschool problems and illnesses.

The child was reported as absent from school a great deal of the time, 8.5 percent for senior kindergarten and 15.5 percent of kindergarten groups. Only 26.7 percent (senior) and 12.1 percent (junior) kindergarten children had never been absent from school within the first three months.

The absence was almost always due to illness in 92.1 percent of recorded cases in senior kindergarten and 88.9 percent in junior kindergarten.

If absence was judged not to be due to the child's illness, it was due to the following factors, as judged by the teacher. Senior kindergarten: 3 or 27.3 percent of those absent were due to sickness in the home; 4 or 36.4 percent to parental indifference; 4 or 36.4 percent to other reasons.

Junior kindergarten: 14.3 percent of absences were due to sickness in the home, 28.6 due to parental indifference; 42.9 percent to parental over-anxiety, and 14.3 percent to "school phobia".

It will be seen that absence from school for reasons unconnected with the child's own illness is relatively infrequent in terms of absolute numbers. There are some indications that absence of junior kindergarten children for non-medical causes may be more related to parental anxiety or the kind of separation anxiety which can take an acute form as dislike or fear of school.

12.1.2 The Child's Settling in School and Social Relationships

Distress at leaving the parent when starting school is a relatively normal and expected occurrence. Among junior kindergarten children 18.5 percent were reported as having considerable distress and 11.1 some distress. By contrast, among senior kindergarten children 3.9 percent were reported as having considerable distress and 14.2 as having some. The higher degree of distress at separation from mother among younger children is expected. It may relate to the slight indications of greater anxiety and dislike/fear of separation in the previous item.

If distress was shown, it persisted as follows:

In junior kindergarten children, 15.8 percent of those with distress showed it up to the present (three months later), 21.1 percent had shown it for over two weeks, 15.8 percent for two weeks, 5.3 for a week and the majority, 42.1 percent for less than a week.

In senior kindergarten children, 9.3 percent of those with distress showed it up to the present, .9 percent for longer than two weeks, 14.3 percent for about two weeks, 14.3 percent for a week and 42.9 percent for less than a week.

There is a suggestion here that distress at entry to school persists longer in the young (junior kindergarten) children, as might be expected. However, persistent distress also appears to be found in older children. Although the numbers involved are small, a significant proportion of children appear to experience fairly persistent distress at school entry.

Possibly related to the child's getting over his distress and to general settling in to his new school is readiness to form "friendships" (or working/play relationships).

Among the senior kindergarten group, 42.7 percent made friends easily and 37.4 percent fairly easily - a total of 80.0 percent who made relatively easy friendships. However, 14.5 percent made friendships with some difficulty and 5.3 percent were still mostly on their own - a total of 19.8 percent of potential poor mixers and "loners".

Among the junior kindergarten group, 25.9 percent made friends easily and 29.3 percent fairly easily - a total of 55.2 percent who made relatively easy friendships. By contrast, 24.1 percent had some difficulty and 20.7 percent were still mostly on their own. The difference between the age groups is striking.

The older children obviously form friendships more readily, as would be expected from their greater developmental and social maturity. However, the one-fifth of junior kindergarten who are still playing mainly on their own after up to three months is unexpected.

12.2.0 Ability, and Progress in the First Term

12.2.1 Ability/assessments by Teacher

The teacher was asked to place the selected child in the top, middle or lower 1/3 of the class in terms of estimated ability.

In the senior kindergarten group, 43 percent were placed in the top 1/3, 39.1 percent in the middle and only 18 percent in the lower 1/3. Obviously, if the children are normally distributed in ability and/or the teacher is estimating ability without bias, there should be approximately equal proportions (one third) in each category. A chi square analysis reveals that the teachers' distribution significantly departs from chance, with a probability of .02 to .05.

In the junior kindergarten group, the distribution is: 28.6 percent in top third, 51.7 percent in middle third and 20.7 percent in the lower third of the class. This does not depart significantly from chance, with the numbers involved here.

There is no significant difference between senior and junior kindergarten (probability .10 to .20).

It is clear that estimates of ability of senior kindergarten children are significantly biased towards the top third of the class, whereas estimates of ability of junior kindergarten children tend to include too many of average ability (middle third) as contrasted with those in upper and lower third in level of ability.

There are alternative explanations for this finding. One is that the sample of junior-kindergarten children selected for study is above average in ability; this could occur even though sampling was rigorously randomized. Alternatively, teachers may over-estimate the ability of the selected children and are reluctant to place senior kindergarten children in the lowest category or junior kindergarten children outside the "average" category. Further discussion suggests there is evidence for this. Both of these explanations could account for the fact that teachers' ratings of social and self help (developmental) skills reported in a following section appear to give high estimates of the developmental levels of children i.e. present children as being advanced in competence. By contrast, estimates of language competence appear to describe children as covering a much wider range of development, much more in line with expected norms from previous studies.

It is also of interest to compare the teachers' estimates of developmental skills with those of parents, as previously reported, and both with the presumed norms in terms of developmental age for social/self help tasks. Both parents and teachers seem on the whole to rate children as developmentally advanced, as compared with expectations for their age based on the literature.

12.2.2 Estimated Progress

Children's progress (learning and adapting to new activities) in their class was described as follows: In senior kindergarten groups, 26.9 percent were "excellent", 37.6 percent were good, 26.2 percent were "average" and 9.2 percent were poor or had problems.

In junior kindergarten groups, 19 percent were "excellent",27. 6 were good, 36.2 percent were "average" and 17.2 percent poor or had problems.

The results are interesting. First, it is clear that once again either the selected children are in general superior in progress as compared with a normal or random sample, or the teachers are biased in their observations. The term "average" is very likely being interpreted by teachers not as representing the median or mean for a class of normal ability, since the majority, 64.3 percent, of selected children are judged as making excellent to good progress and only 26.2 percent "average" progress.

The proportion of children expected to make "average" progress would depend on the statistical assumptions made, but if the term is used to imply that there is a valid comparison between all children leading to the establishing of a mean or median, above and below which there would be 50 percent of children, it would follow that a high proportion of children (at least 1/3 and more likely up to 50 to 68 percent in a normal distribution) would be around the "average".

It seems likely, therefore, that the teachers in the present sample are interpreting "average" not as the median of the class but as something indicating "less than good" performance; the term may well have a slightly unfavourable flavour.

It should be noted that teachers were asked to estimate the selected child's progress in and by reference to her present class, not by reference to previous classes or experience of classes in general or expectations of children based on other criteria outside experience of a class, e.g. developmental expectations. On this basis, there should be similar estimates of good, average and below-average progess for both senior kindergarten and junior kindergarten classes; factors of difference in age or developmental level between the two age groups would be discounted, since the reference point for progress is relative to each class. However, it may be noticed that their teachers rated the progress of junior kindergarten children as distinctly lower (fewer excellent to good, and more average and poor levels of progress) than that of senior kindergarten children.

These results suggest that teachers are not assessing the progress of children purely relative to their age and present developmental level as compared with their age-peers, but at least partly in terms of absolute developmental levels or success on tasks. It is significant that the junior kindergarten teachers cite a higher proportion of "poor progress - has problems".

Another factor is that, in this sample, relatively more junior kindergarten classes from "inner city" areas were included. They may therefore, genuinely have had more problems and made poorer progress or/and the sample may have contained a higher proportion of children of lower ability, than in the senior kindergarten group. However, it should be noted that in the previous item, a high proportion of junior kindergarten children were rated as having "average" ability, which should imply a tendency to at least average progress.

Furthermore, the general developmental levels of junior kindergarten children appear high on social and shelf-help skills (see later) and performance on a variety of cognitive and school tasks does not appear unduly low.

The conclusion drawn here is that, even if there are real differences in ability level and progress as between senior and junior kindergarten groups in this sampling, an important factor in assessments by teachers is a strong bias of over-estimating the ability and/or progress of children (especially older more mature children possibly). The direct observation of the research team certainly strongly suggested that teachers had a bias to over-estimate children's developmental levels, ability or progress and to avoid judgments of poor ability or progress.

This should be borne in mind in considering the assessments of development or checklist data provided by teachers (in the following discussion), as contrasted with the data based on test results.

CHAPTER 13 – THE TEST RESULTS

Teachers were asked to administer a series of brief tests, beginning in the first week of November, 1978 (in the child's first term at school) and to complete testing by November 30, if possible.

Tests comprised of:

13.1.0 Receptive Language: A Group Language Test, containing 11 items testing mastery of grammatical structure drawn from the Circus Test of "How Words Work", and an individual receptive language test, consisting of 4 items on use of prepositions (e.g. "Put the ball behind the box") and 6 items on Following Directions.

Expressive Language: This consisted of 4 items on Oral Expression (e.g. "What is your first name?"; 3 items consisting of Similarities (e.g. "In what way are a pencil and a crayon alike?"); 3 items consisting of Composition of Items, e.g. "What is a spoon made of?"; and a test of Description of the characteristics of two pennies, scored for specific label, colour, shape, material function, number or value, other characteristics and comparative characteristics.

The last test and scoring were drawn from the Windsor Early Identification Project materials and the Circus Test.

Vocabulary consisting of 22 oral definition items from the Wechsler Preschool and Primary Intelligence Scale each scored 0 for incorrect definition, 1 for an acceptable response and 2 for the best (most comprehensive or abstract) response.

Copying Tests consisted of copying 5 letters and a number (drawn from a Circus Test).

Writing consisted of asking the child to print his first and last name, and then print 8 lower case letters dictated to him.

Spelling consisted of oral dictation of the first 10 words from the Wide Range Achievement Test, Level 1, administered with standard conditions.

Pre-Reading consisted of a group test of Matching, in which children were asked to find the correct visual match for a letter printed in the left hand margin from among four choices in a row opposite. Children were asked to match capital letters with capital or lower case, and words of two to four letters in upper or lower case to match with similar, reversed or nonsense patterns made from the same letters.

This test was drawn from the Peabody Individual Achievement Test.

The remaining tests were individual tests requiring the child, when shown a printed number (14 in all), to identify it; when shown a printed lower case letter (15 in all), to identify it.

Reading consisted of word recognition i.e. pronouncing correctly isolated printed words. The test was Level 1 of the Wide Range Achievement Test.

Mathematics consisted of a variety of tasks:

Rote Counting; 2 items requiring the child to count aloud from one upward, as far as 20, and to count aloud from 35 to 52.

Block Counting required the child to count as many as possible of 20 blocks placed in a line, and then to answer 4 items requiring him/her to give the teacher a required number of blocks (3, 7, 10, 12)

Addition and Subtraction (4 items) made use of 6 blocks for child and 6 for teacher and the child was required to put down more than, fewer than and the same number as a given number of blocks placed by the teacher.

Number Sequence was 3 items in 1 test in which the child was asked what number came after a given number (3, 8, 19) .

Length consisted of having the child point to the shorter and the longer stick of two. Seriation consisted of having the child place 4 sticks varying in size by 1 inch or more in order from shortest to longest. Money Concept was 3 items in which the child was shown a penny, nickel and dime and asked how many pennies made a nickel, etc. Math Problems were 4 items of oral questions such as "Mary had 3 puppies; She gave two of them away. How many puppies did she have left?" This last test was drawn from the Peabody Individual Achievement Test. Fraction Recognition was 3 items in which the child was shown four circles divided into half, thirds, quarters, fifths and sixths and asked to identify the circle cut in half, in quarters and in fifths. This one was also drawn from the Peabody Individual Achievement Tests.

Gross Motor functioning was assessed briefly by having the teacher administer 8 items consisting of one involving Balance(walking along a straight line for 10 feet), skipping on one foot and on alternate feet; catching beanbag, standing and walking; large ball caught from direct throw and a tennis ball caught from one bounce. Kicking a ball required a drop-kick of a large ball by dropping and then kicking. The criteria for success and the trials allowed were specified.

Fine Motor function was assessed by:

Cutting: having the child cut along a straight line and around a square with scissors.

Copying Shapes: copying geometric shapes such as circle, square, etc. drawn from the Ilg and Ames series. Strictly speaking, this test is a perceptuo-motor test and involves spatial ability rather than simple eye-hand co-ordination.

Tracing:: required the child to trace with a pencil between double lines forming a circle and an irregular angled figure.

Colour The colour test was adapted from the Windsor Project material.

It required the child to identify and name 14 different colours, presented in two series.

The conditions under which testing was to be done, the criteria for success and the number of trials allowed for each item if any were all specified clearly.

In some tests, specific guidance was given on discontinuing the test after a given number of errors, e.g. in copying, reading or spelling, in order to avoid frustration for the child.

In others, all items in a given group were to be administered.

However, it was left to the teacher to judge when - after trial - certain tests were too difficult for a given child. Thus, for example, a significant number of children did not attempt the printing of the eight letters, or the formal spelling or reading (Wide Range).

Teachers administered the tests, but in some instances when teachers considered they did not have sufficient time, the research team undertook part or all of the testing for them. Despite the apparently large bulk of testing to be done, most teachers found this could be handled for 3 children within class time, spread out over a number of occasions throughout November.

Tests were returned to the research team for checking and scoring.

As noted previously, test items were chosen to sample as wide a range of skills and developmental tasks as possible. They were drawn from a variety of sources such as D.I.S.C. experimental version of checklist items for preschool and early school children (courtesy of Ms. Micki Ellis and Dr. Amdur, Conestoga College; from the University of California,Los Angeles developmental checklist for assessing autistic children (Ritvo et al); from the Wechsler Preschool Scale and from the Peabody Individual Achievement Tests, as well as from the Circus tests for young children (Educational Testing Service) and also from the screening tests devised by the Wellington County School Board. The aim was to establish at least approximate age-developmental norms to guide choice of the content and the difficulty level of tasks so that they were suitable for an age-range of 4 to 5 plus years of age.

13.2.0 Test Results, Analysis and Reporting

Results are reported here as follows: Distribution of total scores is given for main tests and major subsections of tests. These are classified for junior kindergarten and kindergarten separately, for purposes of comparison. In addition, detailed analyses are given of percentage response to many specific subtests, such as the Prepositions items in the Receptive Language test.

Total scores are aggregated for major tests e.g. group test of language, vocabulary, receptive, expressive language, fine motor, gross motor, etc and are in turn aggregated under major headings such as Receptive Language, Expressive Language, Mathematics, Copying/Writing/Spelling/,Reading,Motor. These major groups are cross-tabulated and intercorrelated.

A total performance score, based on scores for component tests is also obtained enabling a child to be described in terms of his total developmental and educational performance or "General Educational Performance".

13.3.0 The Group Language Test

Scores on the 9 items of the Group Language Test ranged from 0 to 9 for senior kindergarten and 0 to 8 for junior kindergarten. This test assesses grasp of grammatical items such as prepositions, tense, negation, and function-words such as "except" or "neither". For the senior kindergarten group, the mean score was 6.3, standard deviation 1.8; 1.5 percent scored zero and 9.2 percent the maximum.

For the junior kindergarten group the mean was 5.1 and standard deviation 1.6; 1.7 percent scored zero and none had a perfect score.

The test provides reasonable discrimination within both age groups, though rather on the easy side; it is suitable for both age groups and the difference in mean score is as expected.

13.3.1 Prepositions

1. This formed part of the Receptive Language individual test. For the senior kindergarten group, the mean was 3.4 (out of 4) and standard deviation 1.0; 0.8 percent of the group scored zero and 70.3 percent had a perfect score.

For the junior kindergarten group, the mean was 2.8 and standard deviation 1.3; 7 percent scored zero and 36.8 percent had a perfect score.

This was obviously a very easy test for the senior kindergarten group; it was also relatively easy for the junior kindergarten group but achieved better discrimination among them.

2. Detailed analysis of each item showed the following:

In the senior kindergarten, 78 percent passed "Put the ball behind the box", the most difficult item; 81.9 percent passed "Put the ball in front of the box"; 96.9 passed "Put the ball under the box" and 89 percent passed "Put the ball beside the box".

The proportions for the junior kindergarten for the same items was 50.9 percent (behind); 69.8 percent (in front of); 84.9 percent (under) and 83 percent (beside).

The results of this test confirm mastery of basic prepositions in the senior kindergarten and junior kindergarten groups.

13.3.2 Following Directions

For the senior kindergarten group the mean (for 6 items) was 4.6 and standard deviation 1.3; 0.8 percent scored zero and 26.8 percent the maximum.

For the junior kindergarten, the mean was 3.2 and standard deviation 1.8; 7 percent scored zero and 8.8 scored the maximum.

This was an easy test for the senior kindergarten group, but more discriminating for the junior kindergarten group, among whom only 8.8 percent attained the maximum score.

Detailed analysis of success on items showed that senior kindergarten scored 88.1 percent success on directions involving three elements in sequence and 59.9 percent on directions involving four elements in sequence.

Commands to clap hands softly and then clap loudly, then stamp feet softly and then loudly were passed by 76.2 percent. "Touch the middle block" was passed by 91.3 percent. "Show me your right hand and left foot" was passed by only 56.3 percent and discriminating which was "soft and hard" as between table and hair was passed by 88.9 percent.

Most of the items were therefore well mastered. However, the item requiring four elements to be carried out in sequence was discriminating within this group, passed by nearly 60 percent; and distinction between right and left, passed by just over 50 percent is - as expected, a fairly difficult item.

Junior kindergarten scored on the same items: 3 element directions 75.5 percent; 4 element direction item, 58.5 percent; clap hands. etc. 58.5 percent; touch middle block 64.2 percent; right and left 30.2 percent and feel soft/hard 62.2 percent.

The generalization would be that whereas the majority of senior kindergarten can readily follow 3 elements or similar directions, about 60 percent of junior kindergarten are ready for this. Right - left concepts are still being established by 50 - 60 percent of senior kindergarten and 30 percent of junior kindergarten.

13.3.3 Oral Expression comprised answering questions such as name, what to do when hungry, cold and the days in a week.

Senior kindergarten scored a mean of 2.8 (out of 4);0.8 percent scored zero and 0.8 the maximum.

For junior kindergarten, mean was 2.1 and standard deviation was 1.0; 8.6 percent scored zero and none scored the maximum.

There is the expected difference between senior and junior groups, but it is not marked.

The detailed analysis of items showed that: the senior kindergarten group scored 89 percent on answering a question on first and last names; 95.3 percent on what to do when hungry; 86.6 percent on what to do when cold but 13.4 percent on the number of days in a week.

The junior kindergarten scored as follows: name 68.5 percent; hungry; 85.2 percent ; cold 75.9 percent and days in week 0 percent.

It is evident that this is an easy test, with the tasks mastered by a majority of both age groups, with the exception of the question on the number of days in a week.

13.3.4 Similarities

These were scored from 0 to 2 depending on the defined quality of answer. On the total of three similarities items: Senior kindergarten scored a mean of 2.4 and standard deviation of 1.5 with 14.8 percent scoring zero and 3.1 percent scoring the maximum possible (6). It is clear that this test, with this scoring, discriminates very effectively over the whole range of the senior kindergarten.

Junior kindergarten scored a mean of 1.5 and standard deviation of 1.7, with 7.4 percent scoring zero and none scoring the maximum.

It is equally clear that this test is a difficult one for junior kindergarten, discriminating within the bright half or third of the group.

Analysis of individual items showed that Item 1 (pencil and crayon) had a mean of 1.2 out of 2 and standard deviation of .9 for the senior kindergarten; 30.5 percent of this group scored zero and 33.3 percent maximum, so it is a highly discriminating item.

For junior kindergarten, mean on item 1 was .7 and standard deviation .9 with 63.2 percent scoring zero and none scoring maximum i.e. a difficult but discriminating item.

On Item 2 (coat and sweater) the senior kindergarten group scored a mean of .7 (out of 2) with a standard deviation of .6; 35.9 percent scored zero and 7.8 percent maximum. Clearly it is a much more difficult item than item 1.

Junior kindergarten scored a mean of .3 and standard deviation of .6; 77.2 percent scored zero and 7 percent maximum. It is obviously a very difficult item for junior kindergarten, but seems to discriminate among the brightest in this group.

On item 3, (cat and mouse) the senior kindergarten scored a mean of .6 and standard deviation of .7, with 51.6 scoring zero and 11.7 percent scoring maximum.

For the junior kindergarten, the mean score was .3 and standard deviation .7, with 77.2 percent scoring zero and 7 percent scoring maximum.

Item 3 is very similar to item 2 in its difficulty and discrimination but seems to produce a greater spread of score.

These results confirm the difficulty of this kind of analogical reasoning and verbal classification for children of kindergarten age.

13.3.5 Composition of Items

These were 3 items asking what a spoon, shoe and door were made of. For the senior kindergarten group the mean score was 2.1 (out of 3) with standard deviation .9; 6.00 percent scored zero and 39 percent maximum. It is therefore a relatively easy test, but discriminates well at the lower ability levels.

The junior kindergarten had a mean of 1.4 and standard deviation of 1.19, with 32.7 percent scoring zero and 14.5 percent scoring maximum. It therefore discrimnates well over the whole range of ability.

13.3.6 Description

This was one of the most open-ended tests, since it required the child to produce his own range of answers, with suitable prompts. The score probably represents verbal fluency as well as vocabulary, plus ability to discriminate and classify verbally aspects of every day objects. Score could run from 0 to 8.

In the senior kindergarten group the mean score was 4.9 and standard deviation 1.6, with only .8 percent scoring zero (no response) but also only 4 percent scoring maximum. The total possible score was 8.

In the junior kindergarten group the mean score was 3.6, with standard deviation of 2.2; 4.8 percent scored no response and 3.7 percent maximum.

The test discriminates well within the upper range of response (4 to 8); there is a difference, but not a marked one, between the senior and junior kindergarten groups. The characteristics of the test suggest therefore that it is assessing verbal fluency as a main factor, rather than reasoning or vocabulary as in previous tests.

13.3.7 Vocabulary

As noted, this was oral definition of standard words, scored from 0 to 2 for quality of response.

In the senior kindergarten group the mean was 20.6 (out of possible 44) with standard deviation of 7.1; only 2 percent scored zero but none scored the maximum. The maximum for this group was 36.

The test, not unexpectedly in view of its origin, discriminated very effectively over the whole range, producing a wide spread of scores.

For the junior kindergarten group the mean was 12.9 and standard deviation 7.7, with 5 percent scoring zero and non attaining the possible maximum. The maximum of this group was 31.

It is evident that there is a clear-cut difference in favour of the senior kindergarten group in level and/or quality of vocabulary.

This test is also appropriate to a wide range of ability, including the youngest and least able, since only 5 percent were unable to define even one word.

13.4.0 Educational Tests

The next group of tests were chosen to sample the educational attainments and "readiness" of the children being studied. They may rely more on specific experience, direct instruction and background cultural experience than do the cognitive and developmental tasks discussed up to this point. To some extent they may measure the outcomes of what has been happening in the first 2 - 3 months of school, but were not intended for this purpose. Since the school experience was limited to three months or less and no baseline taken, one cannot use these tests as measures of educational progress as such. They are however, useful in assessing in a crude way educational level and potential. It is also useful to analyze the relationships between these tests and the cognitive/developmental tests used as predictors.

13.4.1 Printing Name

This is a well-established developmental/educational item usually attained at 4 - 5 year level.

In the senior kindergarten group 65.4 percent could print first name only and 22.3 percent both first and family name, a distinction in developmental/educational level confirmed by experience and by previously established norms. In all, therefore, 87.7 percent could print their first name. However, 12.3 percent made no response.

In the junior kindergarten group 35.2 percent could print first name only and 3.7 percent both first and family name, i.e. a total of 38.9 percent able to print first name. Those giving no response formed 61.1 percent of the group.

This item differentiates very clearly between the senior and junior kindergarten groups, illustrating the importance of a year of additional experience and development, or of exposure to instruction of some kind. This item indicates the kind of expectation there can be for the writing/copying skill of the beginning kindergarten or junior kindergarten child.

13.4.2 Printing Letters was viewed as another writing (copying) task related to some aspects of school work.

The mean (out of 8) for senior kindergarten was 4.5 letters and standard deviation 3.1; 19.5 percent scored zero and 24.2 maximum score. The test discriminates well over the whole range of scores.

By contrast, the mean score for junior kindergarten was only 1 (letter) with standard deviation 2.2 A considerable majority,76.9 percent,could not attempt this task effectively, but 5.8 percent scored at the maximum. The comments made on the previous item apply to this one also.

13.4.3 Spelling

This formal test of spelling was provided to give "head room" in testing spelling/writing skill. It is inappropriate to this age level. The senior kindergarten group had a mean of .5 (of a word), standard deviation 1.6; 84.3 percent of the group made no response. However, 1 child had the maximum of 10 words correctly spelt and 17 (14.7 percent) had a score between one and ten words.

In the junior kindergarten group, 95 percent could not attempt a response and 5 percent attempted one word.

13.4.4 Pre-Reading and Reading skills were assessed by the following tasks.

Matching Letters

This was a test of direct visual matching of one letter or word to one of four in the row opposite, one of the prerequisites for the kind of visual scanning and sequencing required in reading.

In the senior kindergarten group the mean was 5.8 (out of 7) items with a standard deviation of 1.3; 2.3 percent scored zero and 28.5 percent the maximum. The test was easy (median score 5 plus) but discriminated reasonably well in the top part of the score range.

In the junior kindergarten group the mean was 4.4, with a standard deviation of 1.8; 7.3 percent scored zero and 7.3 maximum, so that this test was more appropriate to the younger group and gave a better and more discriminating range of scores.

Performance suggests that it is a practical and useful test for one pre-reading skill.

13.4.5 Reading Numbers

The senior kindergarten group had a mean of 7.7 out of 15 items, with a standard deviation of 4.5; 16 percent scored zero and only 1.7 the maximum. The test was effective in discriminating between children, spreading scores over the whole range, though with the majority (25.2 percent) clustered around 10 (numbers).

The junior kindergarten once again performed well below the senior kindergarten level, with a mean of 2.7 and a standard deviation of 3.9;

55.6 percent scored zero and none scored the maximum, so that this test is considerably more difficult at this younger developmental and educational level.

13.4.6 Reading Lower Case Letters

The senior kindergarten group had a mean of 6.9 (out of 15 letters) with a standard deviation of 5.3; 25 percent scored zero and only 3.3 percent the maximum. This test is slightly difficult for this age group and discriminates very well over the whole score range.

The junior kindergarten group scored very low, with a mean of 1.5 and a standard deviation of 3.3; as many as 75.9 percent gave no response to the test, but the wide spread of scores and performance is shown by the fact that 1.9 percent scored the maximum.

Once again, there is a marked difference between senior and junior kindergarten in a performance which depends on experience and/or instruction. The task is quite appropriate in many respects for children of 5 upward but not well suited to junior kindergarten children.

13.4.7 Reading Upper Case Letters

Performance in reading upper case (capital) letters was significantly better than for lower case.

The senior kindergarten group had a mean of 8.4 (out of 13) with a standard deviation of 5.4; 20 percent scored zero and 43.3 percent the maximum.

The junior kindergarten group also had an improved performance, with a mean of 2.6 and standard deviation of 4.4; 64.2 percent scored zero but 7.5 percent reached the maximum score.

Once again the difference between the senior and junior kindergarten groups on an educational task is marked. Also of interest is the fact, that though the test is a difficult one for junior kindergarten, some children perform very well at the skills involved and overlap with senior kindergarten children in performance.

What is also of interest is the markedly superior performance of both groups in recognizing capital letters. These findings suggest that capital letters are more easily recognizable or less easily confused by children of this age - compare the discrimination and orientation involved in /e/ as compared with /E/ and especially /p/ /d/ /b/ as compared with /P/ /D/ /B/. It is commonly held that it is harder and less efficient to read capitals but this may apply to the experienced reader. These findings raise the question of whether it would be valuable to introduce pre-reading and the first stages of reading via capital letters rather than lower case.

13.4.8 Reading (Wide Range Test)

This formal test of word recognition is too difficult for these groups, beginning as it does with words which are usually read at Grade 1 level. In the senior kindergarten group 81.8 percent made no response and in the junior kindergarten 95 percent. However, 10.7 percent of senior kindergarten children score one on the test, which approximates a Grade 1 level on the norms of the test; and 9 children score between 2 and 10 words, and 1 scored 33 words.

13.5.0 Mathematics

In many respects, assessments of mathematical ability and knowledge (number relationships, counting, knowledge of money) are of educational abilities and skills; however, grasp of number relationships and concepts at the preschool and early school level are also heavily involved in general cognitive abilities, language and the kind of developmental stages found in the conservation of number concepts e.g. in seriation, conservation of a group, identifying length, fractions and same/more/

less relationships. An attempt was made to cover a wide variety of number/mathematical concepts in the tasks included in this study.

13.5.1 Rote Counting

is not the most important mathematical skill, and can become a routine exercise which does not bear close relationship to mathematical reasoning, but it is a necessary stage in the child's acquisition of number sequence and names. Children were asked to count, first from 1 to 20 or as far as they could go. If they succeeded on this item, they were asked to count from 35 to 52.

On rote counting 1 - 20 the mean score for the senior kindergarten group was 3.8 with a standard deviation of 2.9. According to the way in which scores are grouped this means that children scoring at this mean can count to 15 or above. In the senior kindergarten group, 5.4 percent can count only from 1 to 5; 1.6 percent can count from 5 to 10; 14.7 can count from 10 to 15; and the majority (77.5 percent)can count up to 20.

There is a sharp contrast with the junior kindergarten group, in which 23.1 percent can count from 1 to 5; 11.5 percent can count from 5 to 10; 34.6 (the majority) can count from 10 to 15; and 28.8 percent can count from 15 to 20.

This could be interpreted as both a developmental and an educational task.

Rote Counting from 35 - 52 was obviously a harder task. Of the senior kindergarten group 33.9 could count 35 - 45 and 29.9 percent over 40.

Among the junior kindergarten group the majority, 86 percent, could not deal with this task; 2 percent could count from 35 - 45 and 2 percent beyond this. Memory factors, grasp of sequence and lack of experience or motivation to learn this set of numbers can account for this considerable educational difference.

13.5.2 Block Counting

The senior kindergarten mean score of 3.6 means that children with this score can count 15 or more blocks. In this group, only 8.8 percent can count only 0 - 5 blocks; 2.4 percent can count 5 - 10 blocks; 12.8 percent can count 10 - 15 but the majority, 76 percent, count 15 - 20. The junior kindergarten group score significantly lower; 21.6 percent can count 0 to 5 blocks; 15.7 can count 5 to 10; 29.4 percent can count 10 to 15 and 33.3 percent can count 15 to 20.

The scores for block counting and rote counting resemble one another closely, which suggests that, as presented in this study, rote counting and the counting of actual objects are similar skills for the normal senior and junior kindergarten child. More detailed analysis confirms that most of the tasks in this series were very easy for senior kindergarten children: 98.4 percent could give 5 blocks; 95.2 percent could give 3 blocks; 88.8 percent could give 7 blocks; 84.3 percent could give 10 blocks and 75.2 percent could give 12.

Of junior kindergarten children 97.1 percent could give 3 blocks; 74.3 percent could give 5 blocks; 62.9 percent could give 7 blocks; 57.1 percent could give 10 blocks and 37.1 percent could give 12 blocks.

The difference between senior and junior kindergarten children in developmental/educational level is more apparent in this analysis. This analysis also brings out more clearly the differences in task or concept between rote counting i.e. ability to count by rote to 15 or beyond as contrasted with difficulty in finding 12 blocks.

13.5.3 Addition and Subtraction

This is the rather inappropriate label for an exercise in which the child had to show competence in basic number concepts and number language by placing the same number of blocks as the teacher,more, or fewer (using number groups 2 and 5 only). The difficulty of the tasks varied. In the senior kindergarten group, Task 1 (putting down more than the 2 blocks placed by the teacher) was passed by 96 percent; Task 2 (putting down fewer than the 5 blocks placed) was passed by 62.4 percent; Task 3 (putting down the same number as the two placed) was passed by 84 percent, but Task 4 (putting an equal number to the 5 placed) was passed by only 40.4 percent.

The junior kindergarten groups performed as follows: Task 1,90.5 percent; Task 2,35.7 percent; Task 3,45.2 percent and Task 4,16.7 percent. The tasks are clearly much more difficult (discriminating between individuals) than they are for senior kindergarten, and form a scale in a way which they do not for senior kindergarten. Since many 4 year olds can count well above 5 (see present evidence) and handle concrete number relationships in counting and giving groups of blocks, the difficulties are likely to be linguistic, in particular semantic ones. As Donaldson and Wales have pointed out, the concept of "more" is a difficult one for the preschool child.

13.5.4 Number Sequence

This was a verbal test, simply inquiring which number comes after (3..8..19). For the senior kindergarten group the mean was 2.3 out of 3 with a standard deviation of .9; 6.13 percent scored zero and 52.8 percent scored the maximum. The test is an easy one on the whole.

For the junior kindergarten group, the mean was 1.1 with a standard deviation of 1.1; by contrast with the senior kindergarten group, 40.4 percent scored zero and only 15.4 at the maximum.

Since both groups can readily count to 10 or even over, the particular difficulty for the junior kindergarten group is relationship and sequence, and the linguistics involved.

Detailed analysis of the items confirms the ease of the first two items for the senior kindergarten group. They scored 99.2 percent success on what number comes after 3 and 82 percent on what number comes after 8. However, with the less familiar 19, the success dropped to 63.1 percent. This fact demonstrates that, in part, the number concepts and skills of young children are based on familiarity with a particular restricted range of numbersand they have not necessarily generalized their understanding fully to numbers outside this range. This would argue that, in teaching, counting and play with number groups and relationships should be systematically extended up through the decades,not just dealt with in the 1 to 10 or 1 - 20 range and then left to individual experience.

13.5.5 Length

A basic developmental task is to detect the difference between long(est) and short(est).

This was a very easy item for both groups. The senior kindergarten group scored 94.1 percent success on selecting the shortest stick and the junior kindergarten group scored 84.1 percent. On selection of the longest stick, the senior kindergarten group scored 93.2 percent and the junior kindergarten group 93.2 also. These items, basic in understanding the concept and label of length, have obviously been mastered before entry to school by the vast majority of children.

13.5.6 Seriation

This task, apparently similar, was very different in complexity and difficulty. It required the child to arrange only four sticks in order of shortest to longest. Piaget has investigated this task and the concepts underlying it in detail in his "The Concept of Number", pointing out the complex conservation of length and comparison, and the mental imagery or representation required. Not unexpectedly only 59.8 percent of the senior kindergarten group succeeded on this item and only 17.3 percent of the junior kindergarten group.

Developmentally, in terms of number concepts and relationships, this is a basic item. It is much more indicative of various aspects of reasoning and of fundamental number relationships than rote counting.

The fact that only just over 50 percent succeed on this item indicates that it is an appropriate one to measure conservation of number (seriation) at the 5 plus year level; until children master this concept much further work is likely to be built on a quicksand. The low proportion of junior kindergarten succeeding on the item also indicates the lack of readiness at this age for certain kinds of mathematical thinking.

This task provides an interesting contrast to the more "educational" and rote tasks of numbers previously discussed.

13.5.7 Money Concept forms a complete contrast to the above item. It requires, not only a grasp of number relationships but social experience of the actual value of a particular conventional system - money - and so the item is difficult for another reason.

In the senior kindergarten group 29.1 percent knew how many pennies make a nickel; 54.5 percent how many nickels make a dime and 50.9 percent have the practical knowledge of which would buy the most.

In the junior kindergarten group 50 percent know how many pennies make a nickel, 37.5 percent how many nickels make a dime and 50 percent have the practical experience of which would buy most.

It is probable that there is a high guessing factor in this test.

Even more obvious is the effect of experience; the junior kindergarten children have very much the same knowledge of simple money situations as children a year older. That is, this test does depend as much on social experience as on number concepts - a finding which goes back to Burt's study of London (England) school children in his 1917 revision of the Binet intelligence scale, when he found that slum/deprived children scored higher on money items than their counterparts from more intelligent and higher social status groups.

13.5.8 Math Problems

These were oral problems of a fairly abstract kind for children of this age, as found in tests such as the Wechsler or the Peabody Individual Achievement Tests. Three of these items involved subtraction situations and one an addition.

On total score, the senior kindergarten group had a mean of 1.6 (out of 4) with a standard deviation of 1.15; 17.1 percent scored zero and 9.3 the maximum.

The junior kindergarten group had a mean of .6 with a standard deviation .7; 57.7 percent scored zero and none scored the maximum.

This was obviously a difficult test, particularly so for the junior kindergarten group.

Detailed analysis confirmed this. In the junior kindergarten group, 78.3 percent succeeded on Task 1, involving taking 2 from 3 in a verbal problem; 30.4 percent succeeded on Task 2 (taking 2 from 4); 17.4 percent succeed on Task 3 (taking 5 from 9); and 4.3 succeeded on Task 4 (adding 4 to 9). Mean percentage pass (difficulty) was 32.6 percent. There were 35 cases omitted from this task i.e. it was felt to be too difficult by a large number of teachers.

The tasks also discriminated well between the senior kindergarten children and had a wide spread of ability: on Task 1, 87.9 percent succeeded; on Task 2, 52.3 percent; on Task 3, 17.4 percent and on Task 4, 15.9 percent. Mean percentage pass (difficulty) was 47 percent.

13.5.9 Fraction Recognition

The last tasks were the only ones requiring geometrical or spatial presentation. The fraction concepts involved varied considerably in difficulty. In the senior kindergarten group 93.5 percent succeeded on the item requiring identification of a circle cut in half; 39.3 percent identified a circle divided in quarters, and 20.6 percent identified a circle divided into fifths.

In the junior kindergarten group 100 percent recognized a half; but nobody succeeded on or attempted the other figures. The majority, 40 of the children, omitted this test. This task also may have involved linguistic concepts. It is an important one, since not only number work but everyday language and reading require knowledge of the significance of simple fractions.

In general, the math-number tests provide a very varied content and range of concepts, and cover a very wide range of difficulty. Discrimination between senior and junior kindergarten groups is very effective in most tasks, whether it is based on developmental level or experience or instruction .

13.6.0 General Comments on the Developmental/Educational Tasks

Even though the tasks discussed above are limited in number and can only sample in a crude way children's developmental and educational levels after 3 months or less in school, they provide useful bench-marks for the kind and level of performance to be expected in a number of areas - in a variety of kinds of language ability/skill, in math and some educational skills.

The assessments of the "educational" skills reiterate the marked difference between senior and junior kindergarten children over only one year of development, experience or instruction.

These levels suggest the levels at which children are on some rather formal kinds of pre-reading, writing and spelling tasks after a minimum of explicit instruction. They suggest some interpretations of what "pre-reading" (and "pre" - other achievements such as math) means.

Although in many respects children, especially at the senior kindergarten level, do well on many of these tests - suggesting that there should be a good foundation on which the school can build - there is a constant small proportion who do not succeed even on those tests passed by the majority. It is these children - ranging from about 2 percent of the age group to 8 percent upward - who are distinctly below the others in performance, and who may be already heading into learning difficulties and certainly are in special need.

It will be of interest to review those who do not succeed.

13.7.0 Motor Activities

Motor and movement skills provide a foundation for other learning, especially in the first months and years of life; they have their own importance in the child's life and in the curriculum. However, they are not usually so directly connected with social and academic success as are language and mathematics. The correlations between motor and verbal or academic skills are usually lower than between the areas of academic skill and achievement themselves. Within the motor area, skills and skill patterns may be minor or less specific.

It was therefore judged useful to analyze and discuss motor skills in part separately from language, math and educational achievements.

13.8.0 Gross Motor

There is a variety of "gross motor" i.e. large-body and large muscle skills and achievements, involving very different areas such as balance, posture, power, speed, endurance and different body areas. The sample of assessments used in this study could be only very brief and not hope to capture the full range of skills. However, a number of tasks are often found to correlate with general developmental level. Balance was assessed by two attempts of the child to walk a straight line for 10 feet without stepping off.

In the senior kindergarten group 96.0 percent and in the junior kindergarten group only 73.1 percent succeeded on this task. Skipping was assessed by observing the child skipping around the room on alternate feet: in the senior kindergarten group 67.5 succeeded and in the junior kindergarten 28.8 percent succeeded on this task. Catching was assessed by having the child throw and catch a beanbag while standing, being given two attempts. If the child was successful on this task, he was asked to throw and catch while walking.

A further catching task was to catch a large ball thrown to the children. If successful, the child was asked to catch a tennis ball bounced from a distance of 3 feet.

The senior kindergarten group succeeded on Task 1, catching 92 percent, Task 2,76 percent, Task 3, 93.6 percent and Task 4, 79.2 percent. The junior kindergarten group succeeded on Task 1, 73.1 percent, Task 2, 50 percent, Task 3, 90.4 percent and Task 4, 63.5 percent.

A task of dropping and kicking a ball was taken out of the list.

It is evident that the developmental motor tasks assessed here are very to moderately easy for senior and even junior kindergarten children and indicate a good degree of mastery of basic motor skills.

These results tend to corroborate parents' and teachers' assessments of children as having a high level of self-help skills, which can involve a motor component.

13.8.1 Fine Motor Skills

Again, there is a wide range of "fine motor skills" i.e. eye-hand co-ordination tasks, manipulative tasks involving direction, precision, control, speed and interaction of eye and hand, or finger and hand, etc.

One skill commonly found in kindergarten was included: cutting with scissors (i) a straight line without deviating more than 1/8 inch and (ii) a square with 4 inch sides.

Among the senior kindergarten group, 97.3 percent succeeded in cutting a line satisfactorily and 74.5 percent completed cutting the square; among the junior kindergarten group 92.7 percent were reported as being able to cut a line and 56.1 percent as able to cut round the square.

This would appear to be an unusually high level of manipulative skill.

Tracing

The child was asked to trace round a circle, within a double line ¼ inch wide and then trace between double lines round a figure comprising three acute angled corners and two right-angled corners.

Included in the "Fine Motor" tests was one which really belongs elsewhere. It is the Copying Shapes test. This is a test of copying geometrical shapes (circle, square, cross, triangle, diamond and flag) which was adapted from the Ilg and Ames figures in "School Readiness".

Figure drawing tests have, since 1907, formed part of general intelligence and cognitive tests; they have been well-established as tests of general developmental level and also used to assess perceptual-visual level or dysfunction (e.g. The Beery-Buktenica tests).

This test is likely, therefore, to assess something more complex than simple hand-eye co-ordination such as is involved in cutting or tracing; it is likely to involve spatial and perceptual abilities, and involve general intellectual functioning.

For the senior kindergarten group, the mean was 4.2, standard deviation 1.3: The range was from 0 to the maximum of 6.

For the junior kindergarten group, the mean was 2.5, standard deviation 1.2, 6 scored 0 and none at maximum, the maximum scored was 5.

These results are as expected; the test discriminates well for both groups. In terms of previous knowledge of age norms the senior kindergarten groups probably succeeded in drawing circle, cross, square and triangle (items from 2½ to 4 year level) but the diamond and flag are difficult.

The junior kindergarten succeeded on circle, cross, square and triangle i.e. items appropriate to developmental level. This result confirms previous studies on tests of this kind - that they are effective means of measuring developmental level.

The tracing test was very easy and did not discriminate between the senior kindergarten group (mean 1.7 out of 2 items) with standard deviation .5. The test was also relatively appropriate for those junior kindergarten children that attempted it, and they obtained a mean of 1.5, standard deviation of .5. However, the test was judged by teachers to be too difficult for just about half (30) of the cases.

This test would be useful for discriminating those children, especially the poorer kindergarten group, who have developmental lag in fine-motor control.

13.9.0 Colour Naming

This test was included in the sample of tasks used because it requires colour-naming. Items in a number of developmental tests or checklists require the child to recognize or to name four or more colours; both a concept of colour and language are involved. The Windsor Early Identification Project appeared to have employed successfully a more complex and demanding test, requiring the child to name not just the basic colours but a range of less familiar ones, up to 14 in number.

On the coded score for this test, the senior kindergarten group scored a mean of 3.3, with a standard deviation of 1; only .8 percent of children scored zero and 17.4 scored the maximum.

The above mean score means that the children can name 9 to 11 colours.

The junior kindergarten group scored a mean of 2.3 with a standard deviation of 12; 11.3 percent scored zero and 3.8 percent scored at maximum. The above mean score means that children can name 5 to 8 colours.

In detail, in the senior kindergarten group, 3.3 percent can name 1 - 4 colours; 10.7 can name 5 - 8 colours; 48.8 can name 9 - 11 colours; 19 percent can name 12 colours and 17.4 percent can name 13 to 14 colours.

In the junior kindergarten group, 11.3 percent score zero as noted: 13.2 percent can name 1 - 4 colours; 20.8 can name 5 - 8 colours; 45.13 can name 9 - 11 colours; 1.1 can name 12 colours and 3.8 can name 13 to 14 colours.

Clearly this is a useful test of developmental level which discriminates between the senior and junior kindergarten group.

It remains to be seen what its relationship will be with language, math and educational tests in the present sample.

From further knowledge now available, it would now appear that an even more useful test, in terms of language, attention and learning strategies would be one in which the child had to name as rapidly as possible a series of mixed colours and shapes.

It would also have been useful to have tested the speed of processing letters,numbers, etc. and to have used a test of auditory analysis or segmentation of sound such as Rosner's , in which the child is required to remove a sound (letter) from beginning, end or other part of a word to leave a meaningful word, e.g. meat...eat....

Consideration was given to the possibility of including tests of attention or short term memory, but it was decided that the constraints of time and demands on teachers precluded this, and that the goal was to assess important and well-researched developmental and educational levels.

13.10.0 Analyses of Summary Test Scores

Test scores were summed for totals of groupings such as: Receptive language; Expressive language; Vocabulary; Math; Writing; Copying/spelling; Reading; Motor (Gross and Fine) and other variables such as knowledge of colour.

These scores are given in Table A (Appendix). These scores are to be intercorrelated, and related to teachers' estimates of ability and progress. Relationships with socio-economic status and educational level of parents and more direct measures of parents' interest in education such as library membership, reading to child etc. will be explored to find how closely related such variables are and how far developmental level attainment of child can be accounted for by such variables.

Test scores were further summed into larger groups such as Language (Receptive and Expressive), Math., Motor, and the Writing/spelling and Reading tests.

Finally, all test scores were summed for each child to form a grand total score or index of "General Educational Performance". Raw scores were used to obtain the grand total; this procedure has drawbacks such as the fact that tests with larger number of items and/or larger standard deviations will weigh more in the total, and children performing better on tests with higher standard deviations will appear to perform better. In general, however, it can be expected that adding a large number of different test items (or test performances) will tend to produce a useful and reliable total score.

The range of variation in the total scores for all children is illustrated by the results for the senior kindergarten group; this had a range of 278 raw score points from maximum to minimum. The minimum score (1 child) was zero. The mean was 184.5 and the standard deviation 60. The size of this standard deviation indicates that the dispersion of scores is flatter and nearer rectangular than the usual normal distribution; it indicates good discrimination between individual children.

The junior kindergarten group had a range of 1 to 142 raw score points from maximum to minimum, with a mean of 59.517 and a standard deviation of 35.732. This also indicates effective discrimination between individual children.

Because of the large number of junior kindergarten children who did not attempt the writing/spelling and reading tests, these tests were omitted when grand totals were finally calculated.

This range of scores illustrates the considerable range of individual differences in developmental level in the kindergarten groups.

Total raw scores (General Educational Performance) were transformed to Z scores (unit standard normal scores) by equating the percentile points corresponding to raw scores to their equivalents on the normal distribution. This distribution was in turn divided into stanine scores i.e. nine classes equally dividing the score range from plus 3 to minus 3 standard deviation. These stanine scores were used for purposes of computation.

Cross-tabulations and correlations between subtest scores and teachers' estimates of ability (upper middle and lower thirds) showed uniformly significant associations well beyond the .01 probability level.

However, from considerations of the range of scores in each third of the teachers' estimates, it appears very likely that teachers over-estimated the ability of children placed by them in the top third.

This answers a question raised previously - whether this sample of kindergarten children is significantly above average in ability. These results would suggest that they are not, and that it is the teachers' estimates that are biased upwards.

This is confirmed by the standardized vocabulary. If as many children as the teachers indicated were in the top third, the curve of the vocabulary test should be skewed positively, but it is skewed slightly negatively for the senior kindergarten. The curve for the junior kindergarten was symmetrical.

Correlations Between Tests Were (Senior Kindergarten)

	Spelling	Reading	Math	Gross Motor	Fine Motor	Total Motor	Teachers' Estimate
Total Language	.485	.429	.507	.384	.528	.533	.546
Spelling		.696	.539	.359	.527	.531	.610
Reading			.690	.379	.510	.357	.590
Math				.357	.464	.494	.634
Gross Motor					.419	=	=
Fine Motor						=	=
Total Motor							.505

This shows that the tests had moderate to reasonably high correlations with one another. The highest correlations were with the teachers' estimates. This pattern of correlations shows that if a regression equation is computed, it should provide reasonable prediction of teachers' estimates of ability. Or, even more interesting, this confirmed that the teachers' estimates should provide reasonable predictions of the child's ability and achievement. Better still, test scores and teachers' estimates should all be taken into account in describing children.

13.11.0 Differences Between Children Who Attended Junior Kindergarten And Who Did Not Before Entering Kindergarten

It is of interest to find whether children who have attended junior kindergarten for a year are different from those who have gone directly into kindergarten.

To answer this question, the test responses of senior kindergarten children from areas where there are junior kindergarten was compared with the test responses of children from areas without junior kindergarten.

It is to be noted that the data available did not admit of better control.

First, the comparison is between sampling areas, i.e. to some extent city and inner-city versus town and rural areas. It was not feasible, in this study, to obtain significant groups of children from the same areas and same kinds of school, some of whom had had junior kindergarten experience and some not.

Secondly, it is assumed that individual children will have attended junior kindergarten, where it is provided. This is highly probable but not definitely so.

The comparisons between the 2 groups of children (with and without access to junior kindergarten) are as follows:

An analysis of variance of major test score groupings, e.g. vocabulary, math, etc. shows that there is no significant difference between groups.

Analysis of cross-tabulations between groups, using chi-square, showsfew significant associations.

There are some near significant associations reflected in the correlation coefficients (not the chi-square probability) between senior kindergarten with junior kindergarten and senior kindergarten without junior kindergarten on the number of children they tend to play with and on measures of language complexity (i.e. increased use of compound sentences,complex sentences and use of complex phrases as rated by teachers).

The one significant associate (chi square, probability .04) indicates that children with junior kindergarten experience are more likely to be absent from school.

CHAPTER 14 – ASSESSMENT OF DEVELOPMENTAL LEVEL

14.1.0 Self-Help Skills

As assessed by teachers, self-help skills of children were at an (unexpectedly) high level. It should be noted that these items were chosen not to form a scale which would spread children out over a wide range of developmental levels, but to estimate mastery of important skills and tasks. Moreover, skills and tasks had to be such that they were relevant and not too difficult for children of junior-kindergarten age.

Results, ranked roughly in order of the highest proportion of success on task are:

	Senior Kindergarten	Junior Kindergarten
Goes to washroom without help	98.5 percent	100 percent
Unbuttons clothing unassisted;	98 percent	81 percent
Puts on shoes	97.7 percent	89.7 percent
Distinguishes front from back	93.1 percent	84.5 percent
Dresses self without help	91.6 percent	69 percent
Hangs coat on hanger	90.1 percent	89.7 percent
Cleans spills without help	80.2 percent	63.8 percent
Pulls shoelaces tight	79.4 percent	65.5 percent
Makes imperfect knot for shoe	72.5 percent	39.7 percent
Ties shoes with correct knot	57.3 percent	13.8 percent

The high proportion of success on common self-help tasks agrees with the high proportion of success claimed by parents for a small sample of similar tasks, reported in a previous chapter.

It should be noted that the research team, from observation of child and parent behaviour, concluded that there was a strong bias among parents to over-estimate children's progress/competence.

It is possible that teachers too, use fairly liberal criteria for estimating children's self-help competence. A significant and "diagnostic" example in this regard is that of tying a knot, which is known to be a difficult task even at 5 - 6 year level since it involves not only good hand-eye co-ordination but, even more important, spatial ability which is only just emerging at this age level.

Taken at face value, children's success on this checklist of achievements would suggest that children have a good base for independence and self-help which should be valuable for teachers.

14.2.0 Assessment of Social Skills

Levels of social skill are closely related to general developmental level, independence and ability to become a member of a social/play or working group; they are clearly related also to classroom relationships and group organization.

Results of teachers' assessments, ranked in order of frequency of mastery are:

	Senior Kindergarten	Junior Kindergarten
Shares when reminded	98.5 percent	96.5 percent
Takes turns when reminded	96.2 percent	98.2 percent
Co-operates with adult's request on most occasions	95.4 percent	80.7 percent
Handles simple routine jobs with little help	93.1 percent	86 percent
Plays with 2 - 3 children	91.6 percent	84.5 percent
Asks for assistance when having trouble	89.3 percent	89.5 percent
Plays independently for 10 minutes when asked	85.5 percent	71.9 percent
Displays courteous behaviour without prompting	84 percent	66.7 percent
Asks permission from others to use objects 75 percent of time	73.3 percent	42.1 percent
Has a special friend (even for short time)	79.4 percent	68.4 percent

	Senior Kindergarten	Junior Kindergarten
Apologizes 75 percent of time	72.5 percent	59.6 percent
Shows sympathetic behaviour (runs to someone who is hurt)	70.2 percent	36.8 percent
Plays co-operatively with 3 - 4 children up to 30 minutes	60.3 percent	49.1 percent
States how he/she feels (angry, sad)	59.5 percent	63.2 percent
Likes to "perform" for others	56.5 percent	35.1 percent
Initiates group activity	51.5 percent	36.8 percent

Clearly many social skills are so frequent in these age groups that there is no significant difference between them, e.g. in sharing and in playing with up to 3 children; but in relating to others in ways which require perception of their needs and roles (asking permission, apologizing, sympathetic behaviour) the older group show distinctly more mature behaviour. A number of items, such as playing with 2 - 3 others, playing co-operatively with 3 or more children for up to half an hour and initiating group activity are clearly related to classroom organization and learning,and permit the teacher to organize activities or groupings for the older group which could not be handled by a majority of the younger.

There is, in general, a high level of social skills. The mean percentage on all items for the senior kindergarten is 78.6 percent and for junior kindergarten 66.6 percent.

Level of language competence is one of the most important factors in education. Teachers were asked to rate language skills/abilities in quite specific ways. The tasks described ranged from those passed by a very high proportion of children (80 percent or more) to those passed by few (6 percent or less).

Teachers appear to have assessed language competence realistically and specifically. Arranged in order of mastery, the items form a distinct "scale", which can be used to measure where approximately children stand with respect to language competence or level of language acquisition. The order of the items corresponds well with the expected order of complexity/difficulty of language for children, and with the sequence in which language is acquired. Items were drawn from sources such as Crystal's (1976) analysis of the developmental sequence of acquisition of grammatical structures in children. It is reassuring that teachers' estimates follow this sequence reasonably closely.

It is also of interest to compare the present sequence of "scale" of mastery of language with the sequences observed in children with severe language disorders reported in a recent study of communication disorders (Morgan, 1979, Chapters 6 and 7).

Lee (1975) describes the grammatical structures which are most often delayed or distorted in children with language difficulties. The "language scale" is as follows:

	Junior Kindergarten		Senior Kindergarten	
	Always	Sometimes	Always	Sometimes
Uses correct simple sentence	81	89.6	90.8	95.4
Uses regular plurals (-s, es)	67.2	84.4	83.5	89.8

	Junior Kindergarten		Senior Kindergarten	
	Always	Sometimes	Always	Sometimes
Speech is clear and Comprehensible	63.8	82.8	79.4	92.4
Uses copula "is" (e.g. the cat is fat)	56.9	81.0	81.0	90.5
Uses compound sentence (links such as "and", "but")	50.0	77.6	63.0	77.2
Uses appropriate question forms	46.4	73.2	67.6	81.9
Uses phrases e.g. "a ball with a red strip"	27.8	72.2	51.2	77.2
Uses correct agreement(e.g. "they were")	25.0	67.9	46.8	63.5
Uses complex sentences (e.g. links such as "when", because")	21.8	65.4	39.7	62.7
Uses appropriate tenses	15.1	52.8	44.3	13.1
Uses complex phrases e.g. "the boy on abicycle with a hat on"	11.1	75.9	27.2	64.8
Uses passive verb	7.3	60.0	23.6	69.9
Uses irregular plurals	5.9	54.9	31.5	52.5
Mean percentage correct, all items	36.9		52.7	

The "sometimes" category in the list comprises the children who show mastery of the language items only some of the time. It will be obvious that many more children use a grammatical structure correctly some of the time. The difference between junior and senior kindergarten is clear-cut.

Production of correctly formed simple sentences occurs by age 3 - 3½, according to Crystal. There is mastery of phrases and question forms by 4½. It is known that some tense forms (e.g. continuous present), some morphological items such as irregular plurals and, in particular, the passive use of the verb are late in developing (See also Lee, 1975)

As Crystal points out, it is open to question whether all basic grammatical structures are mastered on average by age 4½ or whether it in fact takes until about 6 years of age to achieve basic linguistic competence. The present evidence suggests that children are in fact continuing to acquire or master grammatical structures between the ages of 4 and 6.

It is of interest that, in examining the above table, a significant proportion of junior kindergarten children have speech which is not clear and not fully comprehensible - 36.4 percent in whom speech is always not clear and 17.2 percent in whom speech is sometimes not clear. Even at the senior kindergarten level, there appear to be 20.6 percent of children whose speech is always not clear.

This agrees with many previous studies of speech and articulation including the finding by Kellmer Pringle based on 11,000 seven year olds in a national sample in the United Kingdom, that a significant number of children in the early school years have difficulties in pronunciation and articulation, or are mastering particular items of speech (such as th and zh sounds) up to age 8.

Rutter and Martin also comment on the fact that the receptive language of preschool children and children in the early school years outstrips their expressive language, and that a relatively high proportion of children at school entry still have unclear or incomprehensible speech - but that rapid progress takes place in the first year of school. The small proportion of children who continue to have difficulties in expressing themselves, or fail to master grammatical structures are those who form the nucleus of children with more or less severe language delays or disorders and, as pointed out in Morgan (1979) the incidence of language delay/disorder is considerably enlarged if account is taken of all children who have difficulties in language acquisition.

It is of interest to relate the teachers' estimates of language acquisition and competence to the tests of language and other educational achievements reported later.

The list or scale would appear to have value as a quick checklist to be used by teachers for early identification of children's developmental levels or potential disabilities (See Morgan, 1979).

CHAPTER 16 – TEMPERAMENT AND RESPONSE PATTERN

Parents were asked to assess their children on a rating scale (results were given in an earlier chapter) of temperament or habitual response pattern based on Chess Thomas, et. al.

It has been claimed by Chess and her co-workers that more or less stable and consistent temperamental patterns (response tendencies) of interaction with others can be identified in children even in the early months of life. Some of these patterns or traits appear likely to have importance, not only for the child's interaction with parent and early adjustment, but for adjustment and success in school.

Teachers were asked to use essentially the same scale. To make it practicable, the original detailed scale of highly specific behaviours was condensed so that there was one item which rated each aspect of temperament, with a typical description to illustrate what was meant by the term used. Rating of the scale was on a 5 point scale with "anchor" definitions for each extreme.

16.1.0 Intensity of Reaction

Children were distributed across the scale, but with more children at the "intense" end, e.g. "relating an event with enthusiasm and gusto" than at the "little or no reaction" end of the scale. Senior kindergarten children appeared to be viewed as having more intensity and enthusiasm than junior kindergarten, as can be seen in the following results. On the other hand, this may reflect the tendency of the teachers of junior kindergarten children to be cautious or place more children in the "average" category, as occurred above in classifying children in terms of ability and progress.

Senior kindergarten were rated as follows: 43.9 percent very or distinctly intense, 24.6 percent with little or no reaction and 31.5 percent with a median score. By contrast, the junior kindergarten were rated: 32.8 percent very or distinctly intense, 25.9 percent with little or no reaction and 41.4 percent with a median score. Also on

16.1.1 the Adaptability scale (response to a new or altered situation) the majority were rated as being at the adaptable end. Once again, there was a slight tendency for the junior kindergarten children to be seen as less positive i.e. less who were adaptable and more who found difficulty in adjusting. Results are as follows:

Senior kindergarten: very or distinctly adaptable (i.e. adjusts to school situations quickly) 55 percent; adjusts only after a long time 15.3 percent, and scoring at median 29.8 percent

The "adaptability" response may be one which is highly related to adjustment to school/school progress, and it will be of interest to pursue these relationships in detail.

16.1.2 Threshold of Responsiveness is defined as the intensity level required to get a response to outside stimuli, and also measures sensitivity but of a more direct, sensory kind,e.g. the child's sensitivity to temperature or to other people's appearance or clothing, at one extreme or having to be hurt badly before acknowledging pain at the other.

Once again, the distribution is biased to the positive end (sensitivity) of the scale in both senior and junior kindergarten groups.

Senior kindergarten groups were as follows: very or distinctly sensitive to outside stimuli 37.2 percent; not sensitive (high threshold, has to be hurt badly before acknowledging pain) 24.3 percent; at median level 39.5 percent.

Junior kindergarten had slightly more "average" children than the senior kindergarten group:very or distinctly sensitive 32.1 percent;

not sensitive 23.2 percent and at median level 44.6 percent.

16.1.3 Activity Level is a fairly obvious characteristic; a definition for the upper end of the scale is that the child runs rather than walks, is on the go all the time. At the low end of the scale, the definition is that he prefers quiet activities.

Teachers quite often express concern about the management of the child who is seen as very active or even "over-active", or perceive that the child may have difficulties in settling down to play or work in a constructive way. There may be a mis-identification of activity level with the complex, ambiguous and somewhat confused concept of "hyperactivity". With such a label in common use, there may be a tendency to confuse high activity levels which are normal for the developmental level of the 4 and 5 year old child with "hyperactivity".

It should also be pointed out that, in so far as "hyperactivity" can be consistently and adequately defined and identified, it comprises much more than a high level of motor activity or movement and may involve several of the other dimensions in the temperament scale, notably distractibility, attention span and persistence and probably intensity of reaction and adaptability.

It is of interest that children are perceived as covering a wide range of activity, with the majority scoring in the median range and relatively few extreme but with more "active" than "low active" . The junior kindergarten group are once again perceived as slightly less extreme (at either end of the scale) than are the senior kindergarten group.

Senior kindergarten score as follows: very to distinctly active 32.1 percent; low activity level 20.6 percent; moderate activity level 47.3 percent.

Junior kindergarten score as follows: very to distinctly active 25.8 percent; low activity 20.7 percent and moderate activity level 53.4 percent.

Somewhere within the 10 to 15 percent perceived as "high active" there may be a subgroup who have the additional characteristics or difficulties which might form the basis of "hyperactivity".

16.1.4 The next item Approach-Withdrawal relates to whether a child gets involved in an initial response to a new situation immediately or tends to avoid new situations and to watch other children.

Children are distributed right across the scale, but with a tendency for more to occur at the "approach" end.

Once again, the junior kindergarten group cluster more closely round the median score, but on this item there is a tendency for there to be more junior kindergarten children at the "withdrawal" end of the scale.

It may be recalled from previous discussion of teachers' assessments of the way children have settled in school (above) that there is distinct evidence for kindergarten children showing more distress, and more prolonged distress on entry to school and also being slower to form "friendships". This may be related to approach withdrawal.

Senior kindergarten are perceived as follows: approach readily or immediately 53.5 percent; withdraw 20.6 percent; and moderate tendencies 26 percent.

By contrast, the junior kindergarten are perceived as follows: approach readily or immediately 34.5 percent; withdraw 29.3 percent and moderate tendencies 36.2 percent.

16.1.5 Quality of Mood basically contrasts happy, friendly and consistent behaviour with moodiness, unpleasant behaviour, crying and complaining frequently of getting upset when losing a game.

On the whole, children are seen as not moody, but very happy and responsive.

This is an interesting confirmation of the parental perception on the same scale, and the parents' comments that their experience with children in the preschool years was mainly a happy and pleasant one.

Junior kindergarten are perceived, and this may be expected in view of their greater immaturity, as slightly more moody.

Senior kindergarten are classified as follows: positive mood 69.5 percent; moody or negative 7.7 percent; and variable 22.9 percent.

Distractibility is defined as the response of the child to environmental (or incidental) stimuli in interfering with or altering the direction of his behaviour. A highly distractible child is seen as one drawn away from work easily by distraction such as a child whispering or a noise outside,as contrasted to being able to continue with activity and ignore interruptions or additional stimuli.

In this sense distractibility refers to one dimension of attention i.e. orientation response, response to unexpected outside stimuli or unfocussed attention. To make definitions clear, it can be contrasted with the following item Attention Span and Persistence which it appears to resemble and with which it can often be confused. Attention span and persistence relate more to the second dimension of attention, i.e. focussed attention, or ability to attend to relevant aspects of a task and continue to scan and organize effectively.

There can even be different physiological responses to these two processes.

For example, distractibility or shift of attention is displayed in an increased rate of heart beat or other physiological responses to the interrupting stimulus, whereas focussing of attention and resistance to irrelevant stimuli is displayed by a reduced rate of heart beat,etc.

Distractibility may be one major characteristic of the "hyperactive" child, as well as being a normal developmental characteristic of very young and preschool children. In extreme it may be an indicator of minimal brain dysfunction or brain damage or marked emotional disturbance.

In the processes of attending, the factors of distractibility (alerting to new or interrupting stimuli) and focussed attention (persistence) probably interact.

16.1.6 Distractibility

Children were spread out over the distractibility scale but the majority are perceived as moderately or not distractible. The junior kindergarten children, as might be expected from their developmental level are perceived as distinctly rather more distractible.
Results were as follows: Senior kindergarten: very or distinctly distractible 22.9 percent; not very distractible 46.5 percent; and moderately distractible 30.5 percent. By contrast, the junior kindergarten were: very or distinctly distractible 29.6 percent; not very distractible 37.9 percent; and moderately distractible 22.4 percent.

16.1.7 Attention Span and Persistence relate to the length of time a child continues in a planned activity(and continuation)in the face of obstacles. It defines "focussed" attention as discussed above. It is one of the factors most often mentioned by teachers as crucial for the child's effective learning.

On teachers' ratings, the junior kindergarten group was less persistent or had a shorter attention span, as might be expected from their greater immaturity and lower developmental level. In general, however, children were once again rated positively, most being placed at the "persistent" end of the scale.

Results are as follows:

Senior kindergarten: very or usually persistent 43.4 percent; not persistent (short attention span) 25.6 percent; and moderately persistent 31 percent.

Junior kindergarten: very or usually persistent 34.5 percent; not persistent or short attention span 25.9 percent; and moderately persistent 39.7 percent.

Despite the generally high level of "persistence", there is a significant group of children with very short attention span (7.8 percent senior kindergarten and 12.1 percent junior kindergarten) or who are described as very distractible (13.7 percent senior kindergarten and 8.6 percent junior kindergarten). These children are likely to cause some problems to teachers in management and in arranging effective learning in the present or in the future.

It will be of interest to score children on their temperamental pattern, in particular their pattern on adaptability, distractibility and persistence and to relate these patterns to settling in school and success in school.

SUMMARY: CHAPTERS 12 TO 16

Ratings and Tests

Teachers' ratings suggested that the majority of children entering junior or senior kindergarten are perceived as healthy and having reasonable attendance. However, there is evidence of more illness and absence(possibly due to other than medical causes) in junior kindergarten children. The majority of children are perceived as settling well and quite quickly, but a high proportion were observed to show distress on entering school for the first time and separating from their mothers; the proportion continuing to show distress dropped off rapidly in the first two weeks, but a proportion of children continued (3 months later) to show distress.

Ratings of the ability level of senior kindergarten children by teachers indicated that many more (40 plus percent) were placed in the upper third of ability and many less in the lower third of ability (some 15 percent) than would be expected if the distribution of assessments or of ability corresponded to the expected proportion in each third. This distribution departed significantly from chance.

By contrast, ratings of the ability of the junior kindergarten children tended to place more children than expected in the middle third (50 percent). This was a tendency in teachers' ratings which extended to other characteristics being rated.

Similarly, the progress of the senior kindergarten group was estimated as significantly superior or good,and many more occurred in this category and many fewer in the "average" category than would have been expected. The junior kindergarten group had a higher proportion of children with average progress than would be expected.

The explanation of this finding is that the sample of senior kindergarten children, although randomly selected, may have consisted of children who are significantly brighter and who make better progress than would be expected. The junior kindergarten group, by contrast, may quite realistically have contained more children with lower ability or achievement because the sample of junior kindergarten drew more heavily, in proportion, on "inner city areas"and contained junior kindergartens which were set up to provide for an "inner city area"in one large city. However, this should have led to estimates by teachers of a greater proportion of lower ability among junior kindergarten groups, rather than what was observed - a higher proportion of "average" children.

An alternative hypothesis is that teachers unconsciously or deliberately exaggerated the abilities of the junior kindergarten children in their class who had been selected for study. Ratings of social and self-help skills were very high. Since the total "objective" test scores for the same children covered a very considerable range, with a standard deviation of 60 points (raw score) around a mean of 184 (raw score) points despite the fact that a high proportion of subtests were somewhat easy for junior kindergarten children, it seems likely that the chosen sample were not necessarily above average in ability/ developmental level. This tends to confirm the hypothesis that teachers, in making estimates of ability and behaviour on this sample may have tended to have a strong positive bias.

As noted, ratings for self-help skills such as those involved in eating, dressing and toileting are very high for the senior kindergarten on the whole; the results suggest that a very high proportion of senior kindergarten have the day to day skills which enable them to be independent in and around the classroom. Junior kindergarten children were not quite so advanced in skills but nevertheless were estimated to have a high proportion of children who could look after common self-help tasks. The same results were found for social skills, i.e., sharing, relating to a group, although at a slightly lower level.

As expected, junior kindergarten children had a higher proportion of children who were not so ready to share, feel for others or participate in a group. This confirms a rather more clear cut result in the teachers' ratings which indicated that junior kindergarten children were slower to make "friendships" in the classroom and that a significant proportion (up to one fifth after 3 months) still had no stable "friends" (or play/work mates).

The distribution of ratings on a temperament scale (Chess et al) showed that, depending on the scale, children were rated significantly more often at the positive end of the scale (e.g. not moody, persistent, not distractible, adaptable, active). There were consistent differences between the senior and junior kindergarten children, with the junior kindergarten children tending to appear more often at the less positive ends of the scale (i.e. less mature, more moody, less persistent, more distractible, etc), much as expected. Children were in general pictured as happy and adaptable. These ratings in general resemble those by parents, and it will be of interest to correlate these.

The ratings of children's language behaviour were, possibly because the performance level was clearly specified and could be related to a developmental sequence of stages, clearly defined so as to cover a wide range of language ability - from over 80 percent showing the behaviour (ability to produce simple sentences) all or some of the time down to 15 to 20 percent using regular plurals or complex phrases consistently. This description of children's language spread the children out over a wide range of ability or stages of language acquisition, so discriminating very effectively between individuals.

The ratings formed a crude but effective "scale" of language ability which corresponded to the stages set out in the sources from which language behaviour items were derived (e.g. Crystal, 1976), and which have interesting parallels with the observations of Lee on those language items which are mastered last or least by children with language delay, and with ratings of similar items based on samples of children in Ontario with severe communication/language disorders observed in a recent study. The present rating scale might be of value as a "language acquisition/ability" scale for general use with junior and senior kindergarten children.

Short tests covering important aspects of the curriculum or important developmental abilities were administered by teachers in November. These covered: receptive and expressive language, vocabulary, math., motor skill, pre-writing and spelling and pre-reading. The results on these tests are discussed in detail to illustrate the level and range of mastery on each kind of test and the consistent differences between senior and junior kindergarten groups.

Because of the choice of tests suitable for junior as well as senior kindergarten children, a large proportion of theses tests tended to have a high proportion of high scores or be "easy" for the senior kindergarten group in particular. However, the test content and items had been chosen so that success indicated "mastery" of skills or concepts which are likely to be needed in the first year or first two years of school. Many of the tests, despite the bias to the easy end of the scale, appeared to discriminate reasonably well between the children, both at the senior kindergarten and junior kindergarten levels. The grand total of all tests produced a considerable spread of ability/achievement, covering a range of 278 score points from minimum (zero) to maximum score in the senior kindergarten group. This illustrates the effective discrimination of the total test battery. More important, it illustrates the great variety of ability/developmental level to be found at the senior kindergarten age group at entrance to school. A similar but greater spread of performance with a lower mean level was found in the junior kindergarten.

The difference in score between senior and junior kindergarten groups appeared to be distinctly greater on the "educational" i.e. pre-writing/spelling and pre-reading tests than on developmental tests.

Despite the generally high level of scores, a proportion of children scored low or zero on each test; the proportion obviously varied with each test. However, the occurrence of very low or zero performance indicates that there is a proportion of children who are not achieving (or have not yet achieved) and are already in difficulty in terms of achievement and learning.

More formal pre-writing/copying/spelling or "reading" tests were on the whole difficult for kindergarten children. The junior kindergarten group scored low on such tests and a high proportion did not attempt these tests because teachers felt they would not respond to them. Junior kindergarten children tended to score low but could cope with simple"pre-reading" or early reading tasks such as recognizing upper or lower case letters, but could not attempt a formal word - recognition task such as the Wide Range. Even on this scale, however, the wide range of achievement showed up, since a number of children read up to 10 words (up to Grade 2 level or beyond) and one read up to 33 words. There is good evidence that children can process capital letters more easily than lower case letters at the junior-senior kindergarten age level.

The estimate of children with handicaps in school was given as 6 percent but the teacher ratios point to a much lower figure of children with overt handicap; this difference may, once more, be due to positive bias in rating. It is of interest that a quite high proportion of children are reported by teachers as having indistinct or unintelligible speech at junior kindergarten and at senior kindergarten level.

It will be of interest to relate the "objective" test results to ratings of temperament, e.g., persistence, distractibility and adaptability as made by teachers and by parents, and ratings of settling in school, ability and progress. It will also be of interest to calculate the extent to which socio-economic status, parental level of education and subtler but more direct measures of parental interest such as library membership, reading to child etc. may relate to test score.

The Range of Individual Response

Raw scores on tests were added to form subtotals for major test-groups such as receptive and expressive language, math., copying, writing, spelling, pre-reading and reading, vocabulary, knowledge of colours, and motor skills.

All raw scores on all tests were added, for those children for whom all scores were available, to give a grand total.

Since the various subtests were not weighted according to their standard deviation, the grand total for all tests is a rough and ready estimate of the child's total performance and will be most affected by those tests with the largest standard deviation. However, the grand total does give an estimate of the child's total performance of"general educational performance".

The very considerable range of performance within the senior kindergarten group is brought out by the fact that the range of scores from lowest to highest is 278, and has a mean of 184.5 with a standard deviation of 60.

In the junior kindergarten groups the range was from 1 to 142 and a standard deviation of 35.7 and a mean of 59.5, again indicating a considerable range in ability.

For computation of correlation coefficients between major test groupings, tests were first transformed to "z"(unit standard normal) units.

The present results underline the variety in both junior and senior kindergarten groups.

CHAPTER 17 – THE TEACHERS' OBSERVATIONS OF THE INVOLVEMENT OF THE CHILD IN DIFFERING ASPECTS OF THE PROGRAM

As part of the "package" in Form V of ratings of social and self-help skills, temperament, language abilities and the varied sample of short tests, the teacher was asked to assess the interaction of the child with various aspects of the program. The original source for this attempt to measure the child's response to his environment was the Circus rating materials (Educational Testing Service),also taking into account other methods for assessing children's response to environment e.g. Dr. Chris Nash.

Ratings were in terms of rarely/occasionally, often and almost always; the child was rated as undertaking this activity alone, with 1 other child, with 2 - 3 others and with 4 or more; he was also rated as seeking adult help rarely, occasionally, often or almost always. In the following discussion, these ratings are summarized to give fewer classes, e.g. undertaking activity rarely versus often; alone, with 1 - 3 children, with 4 or more; seeking adult help rarely or occasionally.

17.1.0 Physical Activities Involving the Entire Body (Using no Equipment) e.g. jungle gym

These were undertaken frequently by 69.8 percent of senior kindergarten and 60.7 of junior kindergarten children. These activities were done alone 27.6 percent of the time (senior) and 28.6 percent of the time (junior) i.e. essentially similar behaviour. They were done with 1 to 3 other children in 66.7 percent of cases by senior kindergarten and 60.7 percent by junior kindergarten. They were done with 4 or more children by 18.8 percent senior kindergarten and 10.7 percent junior kindergarten. These differences in group behaviour are slight but in the expected direction, from what is known of the social responses of children of 4 plus and 5 - 6 years of age.

Adult help was sought rarely/occasionally by 93.3 percent of senior kindergarten and 91.1 percent of junior kindergarten.

Activity without seeking adult help on this form of physical exploration and mastery is to be expected at these age levels.

17.1.1 Physical Activities Involving Entire Body Without Equipment e.g. running

These were undertaken frequently by 71.5 percent of senior kindergarten and 67.1 percent of junior kindergarten children.

They were done alone by 18.9 percent of senior kindergarten and 16.1 percent of junior kindergarten children; they were done in groups of 1 to 3 children by 54.9 percent of senior kindergarten and 71.4 percent of junior kindergarten children (the higher proportion in both age groups being in groups of 2 - 3 children); and in groups of 4 or more children by 26.2 percent of senior kindergarten and 12.5 percent of junior kindergarten.

Adult help was rarely or occasionally sought by 94.4 percent senior kindergarten and 96.4 percent junior kindergarten.

17.2.0 Physical Activities Involving Eye-Hand Co-ordination (e.g. puzzles, blocks)

These were undertaken frequently by 70.1 percent of senior kindergarten and 69.6 percent of junior kindergarten children.

They were done alone by 26.2 percent of senior kindergarten but 45.5 percent of junior kindergarten; they were done in groups of 2 - 3 children by 69.2 percent of senior kindergarten and 50.9 percent of junior kindergarten; they were done in groups of 4 or more by 4.8 percent of senior kindergarten and 3.6 percent junior kindergarten.

There is a distinct difference in behaviour on this activity, with more junior kindergarten children undertaking the activity alone or in a small group.

The child sought adult help as follows: rarely or occasionally 92.9 percent, senior kindergarten, and 89 percent junior kindergarten.

17.3.0 Receptive Language Activities (Listening to Stories, Records, Instructions)

These activities were undertaken frequently by 62.5 percent of senior kindergarten and 60 percent of junior kindergarten. That is, the level of involvement is lower than for physical activities.

The child was involved in these activities alone 13.8 percent of the time in senior kindergarten group and 28.3 percent in the junior kindergarten group; these activities were done in groups of 1 - 3 children by 53.7 percent of senior kindergarten and 29.2 percent of junior kindergarten children; they were done in groups of 4 or more by 32.5 percent of senior kindergarten and 41.5 percent of junior kindergarten children. It is of interest that these activities are done more frequently alone and in larger groups by the junior kindergarten children, suggesting that a variety of activities is being reported under this heading and/or that young children both look more at picture-stories or listen to records alone (or are told or read stories by a teacher)and, on the other hand, are found in a listening group or circle.

However, in the senior kindergarten group 93.3 percent are reported as rarely or occasionally seeking adult help, and in the junior kindergarten group a similarly high figure - 88.7 percent - not seeking help is reported.

Taken literally, this means that few children are seen as seeking adult help actively in a receptive language activity such as listening, but can hardly mean that the children are not quite often involved (in a group or alone) in listening to an adult.

17.4.0 Expressive Language - Telling Stories, Playing Word or Rhyme Games, Describing

This seems to include "show and tell", informal story telling and discussion with teacher or others and more formal language games requiring specific responses from the child.

These activities were undertaken frequently by 50.8 percent of senior kindergarten children and by 26.8 percent of junior kindergarten.

This level of activity is significantly lower than for receptive language activities, and junior kindergarten children appear to get distinctly less involved.

The child engages in this activity as follows: alone, 19.7 percent in senior kindergarten and 29.8 percent in junior kindergarten; in a group of 1 to 3, 56.5 percent of senior kindergarten and 44.6 percent of junior kindergarten; in a group of 4 or more, 23.9 of senior and 25.5 percent of junior kindergarten. The "alone" category presumably refers to being with a teacher and not with other children, a situation which one would expect to be more frequent among younger children as indicated here.

However, "seeking adult help" appears strictly defined. Among senior kindergarten groups, 90.6 percent are reported as rarely seeking such help in the activity and among junior kindergarten groups 81.3 percent are reported as not seeking help. This does, however, leave a group of 18.8 percent among the junior kindergarten children who often or always seek help when involved in these activities.

17.5.0 Reading Letters/Words, Looking at Books, Following a Story in a Book

This covers the whole range of pre-reading (of a less formal kind) and reading activities found in the kindergarten classroom.

These activities were undertaken frequently by 51.3 percent of senior kindergarten and 36.8 percent of junior kindergarten.

This difference clearly, and expectedly, reflects the different emphases in program, and the perception that "reading" as an activity of a formal kind has less place among young children than those who are presumably ready for these activities.

The activities were undertaken alone by 39.5 percent of senior kindergarten, and 52.4 percent of junior kindergarten children. Since experience would suggest that reading of letters and words, etc., is not a frequent activity in the junior kindergarten, these results indicate that the "reading" described in this item is likely to be looking at books and following a story.

These activities were undertaken with 1 other child by 27.2 percent of senior kindergarten children and 21.4 percent of junior kindergarten children; they were undertaken in groups of 2 - 3 children by 14 percent of senior and 11.9 percent of junior kindergarten children; they were undertaken in groups of 4 or more children by 19.3 percent of senior and 14.3 percent of junior kindergarten children.

The child is reported as seeking adult help in these activities as follows: rarely or occasionally, 89.6 percent in the senior and 81.9 percent in the junior kindergarten group. This, once more, leaves 18 percent of children who are perceived as often seeking adult help in these activities.

17.6.0 Number/math Activities (games, blocks, rods, equipment)

These activities were frequently undertaken by 35.6 percent of senior and 18.2 percent of junior kindergarten. This is significantly less than for language activities and less still than for physical activities. These activities appear to be distinctly less frequent than are "reading" activities.

These activities are undertaken alone by 32.1 percent of senior and 56.8 percent of junior kindergarten children; they are undertaken with 1 other child by 44 percent of senior and 21.6 percent of junior kindergarten; they were undertaken together with 2 - 3 other children by 16.5 percent of senior and 5.4 percent of junior kindergarten children; they were undertaken in a group of 4 or more by 7.3 percent of senior and 16.2 percent of junior kindergarten children.

The distribution of "alone" activities favouring the junior kindergarten group suggests that one is dealing with math games and math - related activities (e.g. building with blocks or rods) in which the child plays alone, or with individual work with the teacher. By contrast, the senior kindergarten child in most instances is doing this kind of activity together with another child (counting? measuring? playing a co-operative card or board game?). By contrast, slightly more junior kindergarten children seem to do this activity (be taught, or play a game?) in groups of 4 or more.

Adult help is sought rarely by 97.2 percent of senior and by 91.9 percent of junior kindergarten children.

17.6.1 Arithmetical Computation (number facts, oral and written games, etc)

This refers to the more formal and mechanical aspects of arithmetic, possibly activities which some would consider not particularly appropriate to the developmental level and educational needs of children of these age groups.

These activities in arithmetic were undertaken frequently by 23.4 percent of senior kindergarten and 16.2 percent of junior kindergarten. They were undertaken rarely or never by 43.1 percent of senior and 67.6 percent of junior kindergarten. This may reinforce the point made just previously.

The activities were undertaken alone by 37.1 percent of senior and by 63.6 percent of junior kindergarten; they were undertaken with one other child by 24.3 percent senior and 22.7 percent junior kindergarten; they were undertaken in a group of 2 to 3 by 11.4 senior and 9.1 junior kindergarten; and in a group of 4 or more by 27.1 senior and 4.5 junior kindergarten. It is to be hoped that the "lone" activities of the junior kindergarten child are with a teacher - and the same questions arise as in considering reading activities.

It is of interest that a substantial group (over a quarter of children) undertaking these activities do so in a group of 4 or more; this suggests the existence of a certain amount of formal group or class teaching of arithmetic or of arithmetic activities such as oral work.

17.7.0 Writing, Letters and Numbers or Copying Geometrical Forms

This is "pre-writing", possibly perceptual-motor, activities.

The activities were undertaken frequently by 30.9 percent of senior kindergarten and 10.6 percent of junior kindergarten. The importance and relevance of formal writing "activities" might be held questionable for many children of this age level and certainly seems to be viewed as inappropriate or infrequent in junior kindergarten. The findings here would be reinforced by the results of the tests (reported in the previous chapter).

The activities were practised alone by 63.8 percent of senior and 92.6 percent of junior kindergarten; they were practised with one other child by 14.9 percent of senior and 3.7 percent of junior kindergarten; they were practised with 2 - 3 others by 8.5 percent of senior and 3.7 percent of junior kindergarten; they were practised in a group of 4 or more by 12.8 percent of senior and no junior kindergarten children. This pattern suggests that the "writing" activities may well have been copying, or perceptual-motor exercises, or "writing patterns" practised on his/her own or under the supervision of the teacher. It is not a group or class activity yet.

Adult help was sought rarely by 38.5 percent of senior and 53.3 percent of junior kindergarten; it was sought occasionally by 55.2 percent of senior and 30 percent of junior kindergarten. This suggests that whatever the "writing" is, it is a self-guide and self-motivated activity.

17.8.0 Science Activities (experiments, plants, animals, nature) or Cognitive Activities (problem solving, classifying, etc.)

These activities were undertaken frequently by only 17.1 percent of senior and 15.9 percent of junior kindergarten children, as opposed to 52.3 percent of senior and 45.5 percent of junior kindergarten undertaking these activities occasionally and 30.6 percent (senior) and 38.6 percent (junior) never or rarely having these activities.

This is a startling but not wholly unexpected finding. It suggests that science, even in its less formal aspects of observing and investigating, plays a very restricted part in the kindergarten program. Cognitive activities aimed at exploring, observing, classifying, etc., seem to run far behind more obviously physical/motor activities and content/skill activities such as language and even arithmetic and reading/writing. It may be recalled that results on a parental questionnaire suggested that the equipment/content of the program for nursery schools or day care was weakest in the science/environmental studies area;

responses to questions asking parents to place educational aims/activities in order of preference emphasized moral teaching, social skills and the "3 R's" and gave a rather low preference to environmental study and second language teaching. It would seem from the present analysis that the kindergarten programs are meeting parental requirements,in this regard at least.

The activities were undertaken alone by 30.4 percent of senior and 43.2 percent of junior kindergarten;with one other child by 31.5 percent of senior and 29.7 percent of junior kindergarten children; with 2 - 3 other children by 23.9 percent of senior and 10.8 percent of junior kindergarten children; and in groups of 4 or more by 14.1 percent senior and 16.2 percent junior kindergarten children.

These activities, as would be expected from their exploratory nature, are therefore being done alone or with another child, rather than in a group/class setting,which would seem inappropriate for such activities at the age levels being considered here.

Adult help is sought rarely or occasionally by 94 percent of senior and 86.8 percent of junior kindergarten children.

17.9.0 Role-playing Activities (dressing up, dramatic play with puppets, toys, etc)

These activities were frequently undertaken by 59.6 percent of senior and by 49.1 percent of junior kindergarten children, according to observation. This appears to be a rather low figure, in view of the capacity of the 4 - 6 year old for symbolic and imitative play.

Among the senior kindergarten children 12.4 percent and among the junior kindergarten children 14.5 percent were reported as rarely involved in dramatic play; this again appears to be an unusually high proportion of children.

The activities were undertaken alone by 61.6 percent of senior and

13.2 percent of junior kindergarten children; they were undertaken with one other child by 17.2 percent of senior and nearly twice that proportion - 32.1 percent - of junior kindergarten children; they were mainly undertaken in groups of 2 - 3 children, i.e. by 63.1 percent of senior and 52.8 percent of junior kindergarten children. Only 13.1 percent of senior and 1.9 percent of junior kindergarten children were involved in dramatic play with 4 or more children.

The size of group appears to be much as expected of these levels i.e. the limited capacity of the junior kindergarten child to play in a group of more than 1 or two, and the increased capacity for and need of the older kindergarten child for dramatic play involving other children.

Adult aid was rarely sought by 95.9 percent of senior kindergarten and 90.5 percent of junior kindergarten children. This is as expected.

17.10.0 Activities in Producing Music or Rhythm, or Playing Instruments

These activities were frequently undertaken by 48 percent of senior and 41.8 percent of junior kindergarten children. This is a fairly low figure, compared with physical and language activities. It will be recalled that "music" activities were those occurring least frequently in observations of the toys and play opportunities observed in children's homes. (See previous chapter)

These activities were undertaken alone by 12.8 percent of senior kindergarten children and 17.6 percent of junior kindergarten children; they were undertaken in groups of 1 - 3 children by 38.6 percent of senior and 31.3 percent of junior kindergarten children; they were undertaken in groups of 4 or more by 48.6 percent of senior and 51 percent of junior kindergarten children. This pattern suggests that producing music is a large-group or class activity (singing, producing, rhythm, etc.) This finding reflects the analysis of teachers' groupings of children for different areas of the curriculum reported as part of a study of reading in Grade 1 and Grade 2 children in a suburban area of Ontario, which strongly suggested that music and physical education are perceived as essentially "class" activities, even at this young age level. (Morgan, 1979)

Adult help was sought rarely or occasionally by 98.2 percent of senior kindergarten and 86.5 percent of junior kindergarten children.

17.11.0 Listening to Music or Rhythm

These activities were often undertaken by 59.5 percent of senior kindergarten (52 or 39.7 percent of cases missing) and by 37.8 percent of junior kindergarten. Once more, this seems a rather minor commitment in the program. Music was listened to occasionally by 36.7 percent of senior and 45.9 percent of junior kindergarten.

The activity was undertaken alone by 12.8 percent of senior and 30.6 percent of junior kindergarten, which suggests there is a fundamental difference in the kind of listening being done, or the context (with teacher/child alone) in which it is being experienced.

The activity was undertaken by 17.9 percent of senior kindergarten and 13.9 percent of junior kindergarten children together with one other child; it was undertaken in a group of 2 - 3 children by 25.6 percent senior kindergarten and 8.3 junior kindergarten. However, it was undertaken with 4 or more others by practically equal proportions of senior (43.6 percent) and junior (47.2 percent) kindergarten. This pattern, as with producing music, suggests that much listening to music is experienced or taught in a group or class setting.

The help of the adult was sought infrequently by 96 percent of senior and 88.6 percent of junior kindergarten.

17.12.0 Creative Activities, Drawing, Painting, Finger Paint, Collage, Clay, Sand, etc.

These activities were frequently undertaken by 74.4 percent of senior and 69.1 percent of junior kindergarten children, about the same as for physical activities involving fine eye-hand co-ordination (e.g. blocks, puzzles) and for more vigorous physical activities, but distinctly more than for dramatic and dressing-up activities.

The activities were engaged in alone by 38.2 percent of senior and 40.7 percent of junior kindergarten children; with others by 19.5 percent of senior and 18.5 percent of junior kindergarten; with 2 - 3 others by 20.3 percent of senior and 29.6 percent of junior kindergarten; and by 22 percent of seniors as contrasted with 11.1 percent of junior kindergarten children.

This is typically, therefore, a solitary activity or one done with only one other child.

17.13.0 Preference for Types of Activity in the Kindergarten Classroom

The summary order of the frequencies with which the child was observed by teachers participating often or always in given activities is as follows:

17.13.1 Senior Kindergarten:

Creative/art (74.4 percent); Physical activities without equipment; Manipulative (eye, hand) activities e.g. puzzles; Physical activities with equipment: Receptive language; Expressive language; Dramatic play/role playing; Listening to music and rhythm; Producing music and rhythm, etc; Reading; Number/math; Writing; Formal arithmetic; Science/cognitive activities. (17.1 percent)

17.13.2 Junior Kindergarten: Manipulative (eye-hand) activities (69.6 percent); Creative/art; Physcial activities without equipment; Physical activities with equipment; Receptive language; Dramatic role play; Producing music; Listening to music; Reading; Expressive language; Number/math; Arithmetic; Science/cognitive; Writing (10.6 percent)

The rank-order correlation between the two ranks is .97, which indicates nearly perfect agreement in preference for activity in the two age groups.

"Gross motor" activity, involving the whole body, is the most frequent activity for both groups. This probably meets the need of the 4 - 6 year age group for considerable bodily freedom and movement; however, these findings (of a high proportion of motor activity) raise the question of whether motor activity for its own sake is necessarily the most useful educational experience for young children. Academic activities such as reading, writing and arithmetic are, expectedly, low. As formal classroom activities, they are probably not appropriate to a high proportion of children at the junior and senior kindergarten age range. It is interesting to find that "Expressive language"activities have such a low ranking in the junior kindergarten group. Test results and teachers' ratings (previous chapters) indicate that junior kindergarten children are significantly less advanced developmentally in expressive language, and so expressive language activities may be perceived as less appropriate for them, or they are therefore chosen spontaneously less often. However, another line of reasoning might suggest that, if children show less command of expressive language, they need to have more experience and guidance rather than less.

It is disconcerting to find that science/cognitive activities aimed at developing the child's interest in the environment, and ability to observe, classify, experiment, reason, etc. are extremely infrequent. This may be because these activities are perceived as inappropriate to the child's developmental level, which is rather odd in view of the evidence to the contrary (from Susan Isaacs onward).

Or it may be because the program is already full of activities such as physical movement, manipulation, creative activities and language activities which pre-empts the time or resources available; it may be that the typical kindergarten program does not provide the resources and stimulation for such activities; or it may be that teachers, by virtue of their own preparation and prevailing viewpoint, do not or cannot provide a range of science and cognitive activities comparable to the more conventional areas of the program.

This finding is disconcerting since it could be argued that learning the strategies and techniques of learning in itself is as important as having experience of activity and the content/skill areas of the program, apart from the fact that science and technology, ecology and concern for the environment play such a major part in present-day culture.

The above findings should be related to the fact (See findings on Form VI, research-team observations of organization and program in following chapter) that it was judged that in a high proportion of instances, children were permitted to choose their own activities.

PART III
THE OBSERVATION OF THE CLASS

CHAPTER 18 – THE INDEPENDENT OBSERVER'S CHECKS ON ACTIVITIES

In addition to the observations of activities carried out by the teacher (on Form V in the preceding Chapter), the research worker observed children's activities on the day she visited. These are included in this chapter for comparison with the previous discussion of the pattern of activities observed by the teacher. Comparison should also be made with Chapter 19 a later chapter, based on Interview Form VI, in which the research team made their own direct observations of teaching space, activities,organization and program.

It was observed that the selected child in junior kindergarten was engaged in gross motor activity 24.1 percent of responses (observations); in manipulative (puzzle, etc) activities 29.3 percent; in dramatic (role) play 22.4 percent; creative activities (painting, clay, sand, etc.) 39.7 percent, and quiet activities 5.2 percent.

These observations tend to confirm the pattern of teacher observations (in the previous section).

Children in junior kindergarten participated in circle activities most of the time (14.5 percent) and some of the time (47.3 percent.) However, 16.4 percent did not participate at all.

Children in junior kindergarten preferred to play/work in groups 25 percent; with one other 12.5 percent; on their own 30.4 percent of the occasions they were observed. A substantial proportion (21.4 percent)showed combinations of the above patterns, in their activity.

Children appeared to be: very happy 17.9 percent; reasonably happy 51.5 percent; quiet/unemotional 19.6 percent and withdrawn 1.8 percent. Thus a majority but by no means all 69.4 percent were distinctly happy in their activities.

Observations of the child's levels of activity showed the following:

very active 12.5 percent; reasonably active 55.4 percent; not very active 23.2 percent. Thus active children form the majority (67.9 percent). It is of interest to compare this direct observation of children in their class setting with the teachers' and parents' ratings of activity level, which suggest a bias towards fairly high activity in children.

Observations for senior kindergarten children are as follows: they tended to play frequently in: gross motor area, 10 percent of responses; manipulative (puzzles) 25.2 percent; dramatic play 17.6 percent; creative/art area 26.2 percent, quiet activities 11.9 percent, with 19 (9percent) children not observed.

This tends to follow the pattern for teachers' ratios but with distinctly fewer classified as preferring gross motor activities; the same relative emphasis is seen on manipulative play (puzzles, etc.) and creative (art) activities.

There appears to be a distinct difference in pattern between junior and senior kindergarten in participation in gross motor activities, with the junior age group showing considerably more such participation. Conversely, there is distinctly less participation in quiet activities among the junior than among senior kindergarten groups. This is as expected.

Senior kindergarten children actively participated in circle activities: most of the time 28.1 percent; some of the time 55.5 percent, not at all 9.4 percent. This is a higher participation than the junior kindergarten group, but nearly 10 percent did not participate and it would be of interest to know the reasons for this.

Children in senior kindergarten preferred to play/work in groups 31.5 percent of the time; with one other child 17.3 percent; alone 14.2 percent, and in a combination of groups, 26 percent of the time.

Clearly, there is a distinct difference between the junior and senior kindergarten children in preference for groups (senior) and for playing alone (junior). This is as expected in view of the personal - social development of 4 year olds as compared with 5 - 6 year olds, the lesser ability of the younger children to handle group relationships and their greater incidence of parallel rather than shared play. These patterns confirm those previously brought out by teachers' ratings of participation in activities and peer involvement in these activities.

Senior kindergarten children appeared to be: very happy 18.9 percent of the time; reasonably happy 63 percent; quiet/unemotional 13.4 percent and withdrawn .8 percent. In general, as might be expected, the senior kindergarten children were more settled, happier and with fewer quiet or withdrawn children.

These observations can also be related to the teachers' ratings of the degree to which children had settled during the first 3 months in class and the number of "friendships" into which junior and senior kindergarten children had entered (in a previous chapter). It may be recalled that a small but substantial proportion of junior kindergarten children remained without shared relationships after about 3 months in the class.

Senior kindergarten children appeared to be: very active 9.4 percent; reasonably active 71.1 percent; not active 14.8 percent. Fewer senior kindergarten than junior kindergarten children therefore seem extremely active but also fewer are not active. Once again, it is of interest to relate this to teachers' and parents' ratings of activity level (previous chapters).

CHAPTER 19 – INDEPENDENT ASSESSMENT OF THE CLASSROOM: ORGANIZATION; SPACE

In addition to observation made by teachers, the research team made their own independent observations and noted the features of the classroom space, equipment, organization and effectiveness and patterns of availability of the centres; they also observed teachers interacting with the class. These findings are reported in the next chapter.

19.1.0 Size and Equipment of Classroom

Pupil numbers in classrooms observed were: 1 - 15, 23.2 percent; 15 - 25,53.6 percent,and over 25 in a class, 23.2 percent. Thus, the majority of classes have 15 - 25 children. Even so, nearly a quarter of the classes have over 25 children, a considerable number of young children for one teacher to handle adequately if each child is to have an individualized program and to receive the variety of experiences and stimulation he deserves.

The physical size of the classroom was: Larger than average 47.8 percent; average kindergarten classroom size 37.7 percent and smaller (converted traditional grade-level classroom) 14.5 percent. The majority of classrooms therefore had adequate or ample physical space for the range of activities and mode of using them which is normally planned.

Most classrooms were used by one kindergarten group alone and not shared - 91.3 percent. This fact also reflects the finding, in the principal's evidence (see chapter 12) that there were few "open concept" or shared classrooms in the schools studied.

The amount of equipment and supplies available were rated by the observers as: excellent 26.3; good 58 percent; average 15.9 percent and poor in 5.8 percent of observations. In general, therefore, the equipment and supplies for the kindergarten program appeared good.

There was no significant difference in this respect between the sample areas.

19.2.0 Characteristics and Organization of the Classroom

On total appearance and amenities, 39.1 percent of classrooms were reported as very stimulating and 49.3 percent as pleasant, and 10.1 percent as uninteresting.

The majority of classes, 56.5 percent, were based on "learning centres" or areas between which children moved for various activities and 37.9 percent on a combination of centres and permanent seating. Only 3 percent of classrooms had no centres.

In only 18.8 percent of cases were centres defined by permanent architecture; in 79.7 percent, the centres were defined by moveable furniture, and in 4.3 percent by non-moveable furniture. The activities of the classroom could therefore, within reason, be arranged or re-arranged by the teacher. The low proportion of classrooms in which centres and activity areas are pre-arranged by the architecture probably reflects the low proportion of custom-built "open concept" and similar spaces, as noted in the principals' evidence.

19.3.0 The Organization and Use of Activity Areas

The centres were judged to allow of an easy flow of movement by children in 92.6 percent of classes.

Children are allowed to transfer equipment from one centre to another in 60.3 percent of classes. This freedom to transfer equipment could be a sign of flexibility of organization and activity, but it was, in fact, very much under the teacher's control.

An important issue in early education is the extent to which the program meets the child's developmental needs and the extent to which he can follow through his/her own choices. In 88.1 percent of classes children were free to choose their first activity.

When the child had completed an activity, he/she was able to continue freely to another in 81.2 percent of classes.

Conversely, children did NOT have to move on to another activity at a preselected time, in 83.8 percent of classes. This confirms the finding of pattern of free choice above.

The child was not directed what to do in 64.2 percent of instances; directions might be by verbal instruction but also by cards, books or other means. This finding is in many respects positive. However, it should be pointed out that not all authorities on early childhood education agree that young children should be left to a completely free choice, without guidance to give opportunities for sampling a variety of necessary experiences. Obviously in this regard, the kindergartens in this sample differ from approaches such as "open" British "infant schools" in which, despite their freedom to work at a range of activities at their own developmental level, the pattern of commitment to required and to free choice and to various kinds of activity, is guided by a variety of group or personal "programs" or guides.

Another important issue, connected with the above (freedom of choice but also frequency of experience) is answered in part by the following: 74.2 percent classes were judged to provide enough time for children to become involved in each centre. This leaves 16.7 percent where this opportunity did not occur.

The timing of the day's program appeared flexible in 71.2 percent of schools.

However, 22.7 percent of classes did not show this flexibility.

The vast majority of children, however - 92.5 percent were observed as using the centres (in general) at each session.

A summary rating was made of the amount of free activity time available in each classroom i.e. an over-all index of its basis in activity, free choice and (probable, but not necessary) flexibility.

Classses with a large amount of free activity formed 46.2 percent; classes with an average amount 44.6 percent, and classes with very little free activity formed 9.2 percent. This confirms the above findings - that classrooms in general have a high degree of "free activity" and choice by children.

It is of interest that this factor varied significantly between the sample areas. (Chi square .04) The large urban/city areas had a high proportion of free activity time in classrooms, and rural and Northern counties less (though the actual number of classes with very little activity time was 6, in all areas).

The teacher was observed handling transfer from one program or part of the timetable to another; the traditional hand-clap or piano note addressed to the whole class was observed in 46.4 percent of classes and quiet directions or use of a visual signal in 49.3 percent.

19.4.0 Outdoor Activity Areas

Because of the needs for considerable physical/motor activity of young children - needs which cannot by any means be met within a conventional classroom already occupied with a variety of learning centres, it was decided to ask what ouside play areas were available for the kindergarten class.

The existence of its own outside activity area also marks the independence of the kindergarten class, an important factor in providing adequately for the needs of young children within the elementary school

Classes had a designated outside play area in just under half-47.3 percent of cases.

Outside equipment (not necessarily designated for kindergarten as such)included: swings 36.7 percent; climbing frame 64.5 percent; children's vehicles 50.8 percent; slide 27.4 percent. The physical environment of a play area is important: 62.9 percent of outside areas had trees or bushes, which might not only be aesthetic but might provide natural "adventure" situations. Whereas 41 percent had tunnels, only 4.9 percent had a rope ladder. Outside activity is obviously seen as based on physical activities (climbing, using vehicles, etc.) and not for the extension of classroom activities into the outside environment when weather permits. Thus, only 3.3 percent of the outside areas provided water and 29.5 percent had sand.

19.5.0 Effective Organization and Use of Centres

Centres were observed and analyzed in terms of use of space, which comprised 10 factors rated by the observers: the variety of material available, whether the set-up was attractive, whether the area was well used by children, whether the centre stimulated sharing with others, whether the centre was suitably located for its needs, whether it was of adequate size, whether working surfaces were adequate, whether there was provision for display of children's products, whether the centre was equipped with signs and labels to designate use, and whether large equipment was moveable.

These ratings were summed to produce a total score of effective provision and use for each of a number of activities. Ratings were from 1 (poor) to 5 (excellent).

19.5.1 For gross-motor activities, ratings were: (1) (poor) 11.8 percent, (2) 29.4 percent; (3) 26.5 percent; (4) 13.2 percent and (5) (excellent) 1.5 percent. The distribution of ratings covers the whole range, but with a marked bias to the "poor" end viz. 41.2 percent poor or rather poor as against 14.7 percent excellent or good.

19.5.2 For science and environmental study activities, 63.2 percent of classrooms did not have centres. This confirms the findings from teachers' ratings on Form V in a previous chapter that occurrence of or preference for science/cognitive activities was low; the recent finding suggests that low preference for science/cognitive activities is due to lack of provision rather than necessarily to lack of interest by children. It will also be recalled that ratings of day-care and nursery provision by parents (Part I of the present report) suggested that provision for science/environmental study in the program was the least effective. Parents also rated environmental study low on their ranking of goals for the program.

The centres rated were as follows: (i) (Poor) 4.4 percent; (2) 10.3 percent (3) 10.7 percent (4) 11.8 percent. There were more "good" than "poor" centres, but none excellent.

19.5.3 Centres for number/math (mainly manipulative, perceptual-motor materials)

There were no such centres in 11.8 percent of classes. Ratings were: (1) (Poor) 4.4 percent; (2) 29.4 percent; (3) 45.6 percent; (4) 7.4 percent and (5) (Excellent) 1.5 percent. There is a reasonable distribution of ratings, with the majority being average, but the bias is, once again to the "poor" end of the scale - 33.8 percent as contrasted with 8.9 percent good or excellent.

19.5.4 Centres for quiet activities, or quiet areas

Most classes had such areas; 7.4 percent of classes did not. Ratings were: (1) (Poor) 5.9 percent; (2) 14.7 percent; (3) 39.7 percent; (4) 8.8 percent and (5)(Excellent) 1.5 percent. Clearly most such centres, though found in the majority of classrooms and used by the majority of children (see previous chapters on teachers' ratings of activities) were perceived by observers as definitely poor or poorly used: 46.9 percent the poor end of the scale as compared with 10.3 at the good end.

19.5.5 Centres for Role Playing/Dramatic Play

All centres appeared to have such areas. Ratings were: (1) (Poor) 16.2 percent; (2) 41.2 percent (3) 29.4 percent; (4) 8.8 percent; (5) 4.4 percent. As with the "creative" areas, there is a distinct bias to the "poor" end of the scale - 57.4 percent, as compared with the "good" end - 13.2 percent.

A rather disturbing outcome of this set of ratings, which are based on 10 varied and fairly independent characteristics, is the high proportion of centres in kindergarten classes - including those most frequently used - which are perceived as relatively poor in space, organization or use.

CHAPTER 20 – INDEPENDENT ASSESSMENT OF THE CLASSROOM: ASSESSMENT OF TEACHER'S CHARACTERISTICS AND INTERACTION WITH CHILDREN

The research team also observed teachers interacting with their class, and rated characteristics of the teachers' language and teacher behaviours bearing on effective organization and instruction of the class; they also rated important teacher attitudes towards children. These factors were drawn from accounts of previous research, in particular The Teacher's Temperament Scale, by Chess et al.

This previous research, though based on ratings and producing rather complex and diffuse results, demonstrated that there are characteristic patterns of behaviour and attitudes among teachers which can vary with age and experience, the age level of child taught and subject matter of teaching; these patterns of behaviour and attitude may be related to effectiveness of instruction.

It should be emphasized that no evaluation was made of any individual teacher or class; all data are based on group trends and comparisons. The information on any individual or class was coded and cannot be identified.

20.1.0 The "Teacher Language" Checklist

Five factors involving the teachers' use of language in interacting with children were rated by the observer.

20.1.1 Tone of voice (pleasing, not pleasing or harsh) was rated 73.1 percent very pleasant, 20.9 average but 6.0 percent unpleasant.

20.1.2 Employment of usage/grammar was rated as follows: good usage/grammar 83.6 percent; average 16.4; none poor.

20.1.3 Good/frequent use of Positive Statements to Children

These were: 65.2 percent very positive, 21.2 average use but 13.6 percent low.

20.1.4 The teacher speaks directly to the child: 82.1 percent high rating, 16.4 percent average; none low.

20.1.5 The teacher speaks at the child's level: High rating 79.1 percent; average 17.9 percent and 3 percent low rating.

In summary, this presents a positive view of the kind of interaction between teacher and children in the kindergarten classroom.

The teacher was observed interacting with the class, and estimates were made of the following factors of behaviour, organization and attitude based on previous research studies.

20.2.0 Teacher Characteristics in Class

Teacher Behaviours: These were each rated 1 (less favourable) to 5 (most) unfavourable.

20.2.1 Factor 1 Stereotyped versus Original: Routine to unique on each item. Ratings were: (1) (Routine) 3 percent; (2) 15.2 percent; (3) 31.8 percent; (4) 43.9 percent (5) (Original) 6.1 percent. Thus, teachers are rated as being at the original end of the class (50 percent)

20.2.2 Factor 2 Autocratic to Democratic: Tells children each step versus guides pupils to decisions, asking their opinions.
Ratings were: (1) Autocratic 2.9 percent; (2) 9 percent; (3) 22.4 percent; (4) 44.8 percent (5)(Democratic) 20.9 percent.

Ratings predominated at the "democratic" end of the scale (65.7 percent)

20.2.3 Factor 3 Inflexible to Flexible: Rigid in routine versus can change response to suit circumstances.
Ratings were: (1) (Inflexible) 3.4 percent; (2) 1.7 percent; (3) 22 percent; (4) 57.6 percent; (5) (Flexible) 15.3 percent.

The majority of teachers (72.9 percent) are rated as flexible.

20.2.4 Factor 4 Self Confidence: (1) Seems unsure of self versus confident and sure. (2) (Rather lacking confidence) 1.5 percent; (3) 11.9 percent; (4) 31.3 percent; (5) (Confident) 55.2 percent.

20.2.5 Factor 5 Organizational/Planning Ability: no planning in evidence versus plans flexibly. The ratings were: (1) (no planning) 4.5 percent; (2) 3 percent (3) 10.4 percent; (4) 52.2 percent; (5) (plans flexibly) 29.9 percent. Thus the vast majority of teachers (82.1 percent) are perceived as effective in planning their instruction.

20.2.6 Factor 6 Impulsive vs. Controlled Behaviour: impulsive versus calm, controlled behaviour. The ratings were: (1) (relatively impulsive) 4.5 percent; (2) 11.9 percent; (3) 38.8 percent; (4) 44.8 percent (calm, controlled). Thus the vast majority of teachers (83.6 percent) are rated as calm and controlled in behaviour. This is important, since some research (e.g. Kagan) suggests that the teacher has a quite specific effect on the class for the year he or she teaches it and that the "turbulent" teacher (Kagan's term) contributes to impulsive behaviour by her pupils.

20.2.7 Factor 7 Understanding of Children's Needs: No obvious concern for personal problems of pupils to great awareness of pupils' emotional problems and needs. Ratings were: (1) (little or no understanding) 1.6 percent; (2) 6.3 percent (3) 26.6 percent; (4) 25 percent; (5) (good understanding) 40.6 percent. Thus, the majority of teachers were judged to have good understanding of children's needs (65.5 percent), but this is considerably lower than for previous factors of confidence, organization and calmness.

20.2.8 Factor 8 Harshness-Kindness was defined by cross, curt, scolding behaviour versus friendly, pleasant, with many complimentary or reinforcing remarks to children.

Ratings were: (1) (harsh/scolding) 3 percent; (2) 7.5 percent; (3) 20.9 percent; (4) 25.4 percent (5) (friendly/positive) 43.3 percent.

Thus the majority of teachers (68.7 percent) were perceived as positive and friendly in manner to children - about the same proportion as showed perception of children's needs.

20.2.9 Factor 9 Handling of Discipline Poor versus good control of children. Ratings were: (1) (Poor discipline/control) 1.5 percent; (2) 3 percent (3) 16.4 percent (4) 37.3 percent; (5) (good control)41.8 percent .

Thus the vast majority of teachers (79.1 percent) were rated as having good control of their classes.

The remaining factors were ratings of teachers' attitudes. These attitudes reflected, not so much personal characteristics of the teachers,as their perceived interaction with and effect on the class.

20.2.10 Factor 10 Unpleasant, depressed vs. Cheerful, Good-natured

Ratings were: (1) (Unpleasant) 1.5 percent; (3) 14.9 percent; (4) 38.8 percent; (5) 44.8 percent (Good natured).

This is an interesting factor. The majority of teachers (83.6 percent) were rated as above average in being cheerful and good natured.

20.2.11 Factor 11 Aloof, apart from pupils vs. very approachable.

Ratings were: (1) (Aloof) 1.5 percent; (2) 4.5 percent; (3) 20.9 percent; (4) 34.3 percent (5) (Approachable) 38.8 percent. Thus a majority of teachers(93.1 percent)are perceived to be approachable by the children.

20.2.12 Factor 12 Appearance: Drab, Colourless vs. pleasing

Ratings were: (3) (average) 11 percent; (4) 35.8 percent; (5) 52.2 percent. Thus the vast majority of teachers (88 percent) were perceived as having a pleasing personal appearance.

20.2.13 Factor 13 Appearance: Listless, languid vs. buoyant, wide awake

Ratings were: (2) (Rather listless) 3 percent; (3) 13.4 percent; (4) 38.8 percent; (5) 44.8 percent. Thus, most teachers (83.6 percent) were perceived as buoyant, wide awake and energetic teachers. This is an important finding. Studies such as those of Farnham-Diggory on teachers' specific characteristics in relation to classroom characteristics and pupils' response strongly suggest that a major influence on teacher effectiveness in the classroom is not so much training or experience or specific personality as simply abundant energy, drive and buoyancy.

The ratings discussed above are subject to the difficulties attached to any ratings of personal behaviour and performance i.e. halo effect, prejudice, positive or negative misperceptions. They represent the summary of three different raters rather than the same three raters observing the same person, and the different dimensions or perceptions of each rater are not separated out; however, it can also be concluded that different ratings (i.e. differing in perception and therefore in their mean and spread) have to some degree been averaged out in summing the ratings. Perceptions represent those of a teacher, trained early-childhood worker and research worker with good previous immersion in classroom observation. All three observers are mature persons who are parents of children of varied ages, and so have a reasonable knowledge of the school system and of parent-teacher and teacher-pupil interactions as perceived by detached observers.

Ratings of behaviours and attitudes, moreover, were not done on isolated "personal" characteristics but based on observation of interaction within specific classrooms; ratings may measure the "semantic differential" or particular structure of judgments of the raters, but research indicates that this structure is likely to be consistent and at least indirectly reflect characteristics of the individuals and concepts which are brought together in rating. More likely, the observers' observations in an active classroom situation represent the kind of stable patterns indicating how one person perceives others which are represented by "Constructs" in Kelly's (1955) sense of "personal constructs". Kelly has shown that a set of dimensions of a person can be consistent and valid for that person.

It is of interest that the ratings contributing to these constructs are not all uniform in level of positive/negative judgment; these variations give some support to the validity of the ratings, e.g. the highly positive ratings of energy , flexibility, self-confidence, ability to plan and personal control as contrasted with reserved judgments on democratic and friendly behaviour and the suggestions that originality or perception of children's needs is not the most marked characteristic.

These variations strongly suggest that real people, with a high level of positive behaviour towards children are being described.

PART IV

THE TEACHER – CHARACTERISTICS AND PHILOSOPHY

CHAPTER 21 – CHARACTERISTICS OF TEACHERS; QUALIFICATION AND EXPERIENCE: ORGANIZATION OF CLASSES

The number of classroom teachers completing the questionnaire was: 43 senior kindergarten, and 14 junior kindergarten, total 57.

21.1.0 Qualifications and Training of Teachers

Practically all teachers have teacher-training qualifications. (97.7 percent senior; 100 percent junior kindergarten). All are certified teachers. Very few have a Child Care Certificate (100 percent senior, 97.9 percent junior kindergarten).

About a third have a bachelor's degree (32.6 percent senior, 35.7 percent junior kindergarten). There is one Master's degree in each group.

Teacher-training was, in practically all instances, obtained in Ontario. Among the senior-kindergarten teachers, 92.9 percent were trained in Ontario, 4.8 percent in other provinces and 2.3 percent in the United Kingdom. Eleven of the junior kindergarten teachers were trained in Ontario.

There were few with preschool teaching experience. Among the senior kindergarten teachers, 39.5 percent had no such experience, and 55.8 percent did not answer, so presumably also did not have preschool experience. Only one (2.3 percent) had 6 - 10 years experience and one (2.3 percent) 11 - 20 years experience. Among the junior kindergarten teachers, 21.4 percent had no experience and 64.3 percent gave no response. Only one (7.1 percent) had 1 year's experience and one (7.1 percent) had 6 - 10 years experience.

Experience of junior or senior kindergarten teaching was obviously greater than that of preschool teaching; years of experience appeared to be considerably far greater for senior kindergarten than for junior kindergarten teachers.

Thus, among senior kindergarten teachers, the median level of experience was greater than 5 years and in the range 6 - 10 years; 4.8 percent had no experience; 4.8 percent had 1 - 2 years experience; 21.4 percent had 3 - 5 years experience; 28.6 percent had 6 - 10 years experience, and 40.8 percent had 11 - 20 or over years experience.

Among junior kindergarten teachers, the median level of experience was at the top end of the 3 - 5 year range; 14.3 percent had no experience; 35.7 percent 3 - 5 experience; 35.7 percent 6 - 10 years experience and 14.3 percent 11 - 20 years experience.

It seems likely that younger, and for that reason less experienced teachers are in charge of the junior kindergarten group.

Experience of primary grade teaching was limited, with the senior kindergarten teachers again having longer experience.

Among the senior kindergarten teachers, the median level was in the 3 - 5 year range; 15.6 percent had no such experience; 15.6 had 1 - 2 years experience; 25 percent had 3 - 5 years experience, but a distinctly higher proportion, 37.5 percent had 6 - 10 years experience and 6.1 percent had 11 - 20 years experience.

Among the junior kindergarten teachers, the median level of experience was at the 2 year level; 9.1 percent had no experience; 43.5 percent had 2 years experience; 18.2 percent had 3 - 5 years experience; 18.2 percent had 6 - 10 years experience and 9.1 percent had 11 - 20 years experience.

The total number of years of teaching experience obviously reflects the above differences between the two groups:

For the senior kindergarten teachers, the median level (total years of teaching) was at the 11 - 20 year level; only 3.5 percent had taught only 2 years; 7.3 percent for 3 - 5 years; 17.1 percent for 6 - 10 years, and the majority, 35.7 percent, for 11 - 20 years. A significant number, 17.1 percent, had taught for over 20 years.

For the junior kindergarten teachers, the median level of experience was the 6 - 10 year level; 7.1 percent had taught for 3 - 5 years; 50 percent for 6 - 10 years; 28.6 percent for 11 - 20 years and 14.3 percent for over 20 years.

There was in general little experience of teaching in special education: 94.9 percent no such experience among senior kindergarten teachers; 84.6 percent among junior kindergarten teachers. But of the 2 senior kindergarten teachers who had taught special education, one had done so for 3 - 5 years and one for 11 - 20 years; the 2 junior kindergarten teachers had taught special education for 2 years and 6 - 10 years, respectively.

Only one junior kindergarten teacher and no senior kindergarten teacher had been a vice principal. Only 1 senior kindergarten teacher had been a principal.

Only 1 senior kindergarten teacher had been a consultant, for 3 years; and 1 junior kindergarten teacher had been a consultant for a year and 1 other for 12 years.

In summary, the majority of kindergarten teachers have a considerable amount of teaching experience. Senior kindergarten teachers appear to have significantly more experience than junior kindergarten teachers. This length of experience should be an asset; it might also be a liability, in the sense that older teachers after many years of service may be less flexible and attuned to change, and lack the energy they once had. It is interesting to cross-refer these findings to those based on the observations of the research team on teacher characteristics, in a previous chapter.

Kindergarten teachers tend to have a significant amount of experience of primary grades. However, practically none has any acquaintance with teaching in special education classes, and practically none has experience of pre-school children. This latter fact could be a considerable obstacle to understanding and sympathizing with the aims and procedures of nursery schools and day care provision.

The fact that very few kindergarten teachers enter partly or wholly administrative posts such as the office of vice-principal and principal does not mean that very few have become principals; however, there is a strong presumption that this will be so. Kindergarten teachers do not appear to participate strongly in administrative and consultative varieties of post. This could confirm the suspicion that kindergarten teachers as such tend to be professionally isolated in their classrooms and have relatively little autonomy or effect as educational leaders, in terms of administrative responsibility and power.

21.2.0 Organization of Class and Program

The direct report of teachers confirms that the major pattern is for kindergarten classes to meet half days, morning or afternoon 88.5 percent and many fewer meet on full days, alternate days; 7.1 percent.

The typical number of fully qualified teachers per kindergarten class is one teacher; 88.4 percent of senior kindergarten classes and all junior kindergarten classes have one teacher present in the classroom. However, 9.3 percent of senior kindergarten classes had two teachers present and 2.3 percent had three. This last finding reflects the fact that there were a small proportion of schools with "open concept" arrangements or shared teaching (see principal's questionnaire and parents' responses in previous chapters).

Most classes do not have a paid teachers' aide: the senior kindergarten classes had 2 (5 percent) and the junior kindergarten classes also had 2, a higher percentage (14.3 percent) of the total. This contrasts with the proportion claiming to use volunteers (see previous chapters e.g. principals' questionnaire).

The program is not usually planned in advance, but is claimed to be a combination of planning and flexible response from day to day to children's needs: 1 class (2.3 percent) in the senior kindergarten group claimed to plan wholly in advance but 97.7 percent were the combination described above as were 100 percent of junior kindergarten classes.

The curriculum/program is determined as follows: in senior kindergarten classes, it is determined entirely by the class teacher in 9.3 percent, and by a combination of both board of education and teachers in 88.4 percent of cases.

The pattern for junior kindergarten classes was similar: 7.1 percent of programs determined by the teacher and 92.9 percent determined by board of education and teacher. The questions asked did not permit of a more searching inquiry into how the teacher and the board of education combined in the selection and organization of the program.

CHAPTER 22 – THE EVALUATION AND ASSESSMENT OF CHILDREN; SCREENING AND INFORMATION ON CHILDREN AT ENTRY TO SCHOOL

Teachers were asked for their views on the information they received on children, the information they would like to receive, their practices in recording and evaluating the abilities and progress of children and their relationships with parents.

Responses were based on Form IV, a questionnaire on which teachers submitted a very considerable variety of information: on training and experience; organization and planning of classroom; evaluation and assessment; parent-teacher relations; classroom equipment; educational objectives; time spent on various areas of activity; forms of grouping for major activities; teaching and disciplinary techniques, and educational viewpoints. All this gives a valuable and comprehensive review of the teachers' characteristics, views, beliefs and practices.

Additionally, teachers were asked on the same form to provide information on their expectations for children in their class, in bottom, middle and upper thirds of ability at the beginning and end of the school year.

22.1.0 Information on Child at Entry to School

The teacher was asked what information she received on children before they entered the class. The senior kindergarten teachers gave the following responses (proportion of cases answering)

Information from health records (hearing and vision checks included) 52.4 percent; social (family) information 26.2 percent; the results of kindergarten screening tests 23.8 percent; and no information in 21.4 percent of cases.

The junior kindergarten teachers gave the following responses (proportion of cases responding): Information from health records 53.8 percent; social-family information 38.5 percent; results of kindergarten screening 7.7 percent; and no information 30.8 percent.

From this, it would appear that the main source of information on the child at entry to school is health records. A minority of senior kindergarten children have had kindergarten screening to identify their needs and possible handicaps and this screening obviously takes place at the senior kindergarten level. There is no prior information on a significant proportion of children.

22.1.1 Teachers were asked what information they would like to have and which would be likely to be helpful to them, before the child enters school.

Responses were: (proportion of cases responding)

Senior kindergarten teachers: More information from health records 78 percent; social/family information 65.9 percent; kindergarten screening test 41.5 percent; developmental levels based on standardized test 22 percent.

Junior kindergarten teachers gave the following responses: Health records 84.6 percent; social/family information 76.9 percent; kindergarten screening test 61.5 percent; and developmental levels based on a standardized test 7.7 percent.

Teachers therefore seem to want more of the same information with which they are familiar. There is a desire for increased provision of kindergarten screening/identification but no commitment to standardized testing.

Where kindergarten screening/identification tests were administered, they were the responsibility of various services, as follows:

Senior kindergarten (proportion of cases) the public health department 85 percent; school psychologist 5 percent; class teacher 10 percent; special education teacher 5 percent.

Junior kindergarten reported: public health department responsible 80 percent; psychologist 20 percent.

That is, the public health service was mainly responsible for the pre-school screening/identification of children. Since such screening procedures are medically oriented, though providing assessments of developmental functioning, they may not be the best suited to educational needs.

22.2.0 Children with learning or behaviour difficulties can be referred for assessment or help in the majority of cases according to the teachers' report: 92.7 percent of senior kindergarten teachers and 78.6 percent of junior kindergarten teachers felt this to be so. The analysis of responses is as follows: For senior kindergarten - children can be referred readily, 26.8 percent; can be referred readily but with some delay, 53.7 percent; can be referred fairly easily, 12.2 percent, and not easily referred, 7.3 percent.

The junior kindergarten teachers were less optimistic - children can be referred easily, 14.3 percent; readily but with some delay, 35.7 percent; fairly easily, 28.6 percent, but not easily, 21.4 percent.

The perception of ease and adequacy of referral for special assessment and help may well be related to the proportion of children perceived by these teachers as having special needs or difficulties; later discussion tends to suggest that kindergarten teachers in this sample underestimate the proportion of children who have or are likely to show special educational needs or learning difficulties.

22.3.0 Support services for helping the teacher were reported as follows: For senior kindergarten teachers: (proportion of cases responding) public health nurse 90.7 percent; psychologist 72.1 percent; primary consultant 67.4 percent; early childhood consultant 25.6 percent, and curriculum consultation 37.2 percent.

For junior kindergarten teachers: public health nurse 100 percent; psychologist 78.6 percent; primary consultant 64.3 percent; early childhood consultant 50 percent, and curriculum consultant 42.9 percent.

The junior kindergarten teachers appear to have more access to an early childhood consultant. Medical and psychological support services appear to be good.

All teachers reported that: Children can be referred for a check on vision, and the majority reported that children can be referred for a check on hearing: 86 percent of senior kindergarten and 85.7 percent of junior kindergarten.

There are slightly lower but similar proportions for availability of check on speech and language: 81.4 percent senior kindergarten and 84.6 percent junior kindergarten. This estimate of availability of services appears to be high.

22.4.0 The teacher was asked how she assessed and recorded a child's progress.

The responses of senior kindergarten teachers were (proportion of cases responding): By using anecdotal records 97.7 percent; recording under specific headings such as language, motor skills, etc. 65.1 percent; collection of samples of children's 79.1 percent; systematic recording (written up periodically) 48.8 percent; recording of specific tasks mastered 60.5 percent; prepared checklists of skills; achievements 69.8 percent; informal tests 51.2 percent, and formal tests 34.9 percent.

The responses of junior kindergarten teachers were: by using anecdotal records 85.7 percent; recording under specific headings 71.4 percent; collection of samples of children's work 64.3 percent; systematic recording 57.1 percent; recording of specific tasks 51.7

percent; prepared checklists 28.6 percent; informal tests 21.4 percent, and formal tests 7.1 percent.

These results show clearly that teachers' preferred methods of assessing and recording are informal, depending heavily on anecdotal records recording specific kinds of skill and achievement or collecting samples of children's work. Informal tests play a larger part in the senior kindergarten than they do in junior kindergarten; conversely, there is much more use of prepared checklists of behaviours and skills and some use of formal tests among senior kindergarten teachers.

The two approaches judged to be the most useful or important were: Senior kindergarten: Anecdotal recording 66.7 percent; recording under specific headings 28.2 percent and use of a prepared checklist 28.2 percent. These were followed, in order of priority, by collection of samples for work 25.6 percent and informal testing 17.9 percent.

Junior kindergarten: anecdotal records 78.6 percent; recording under specific headings 28.6 percent. These were followed by: collection of samples of work 21.4 percent and systematic recording or use of prepared checklists 14.3 percent each.

It is clear that the preference is for anecdotal reporting.

It is of interest to compare these findings with similar questions put to teachers of children with severe language disorders and delays in a recent survey in Ontario (Morgan, 1979). The same emphasis on anecdotal and informal recoding and evaluation of children's progress in the classroom was observed.

22.5.0 Assessing and recording Progress

The records of the child's achievement and progress are not all sent on to teachers at the next stage of the child's education. Only 53.8 percent of junior kindergarten teachers state that they send their records on to the next stage and 60 percent of senior kindergarten teachers. This leaves from over one third to nearly one half who do not forward records. This is an interesting finding, in view of the statements, in the principal's evidence that both junior and senior kindergarten teachers are considerably involved in discussions of transferring children to the next stage and in continuity between stages, and that these arrangements for communication between teachers are informal. It would appear that much is entrusted to oral discussion and word-of-mouth recommendations; it would seem valuable to share records of a child's achievement and progress with the colleague who will be responsible for the child in the following year.

The progress of the individual child is recorded about every 2 weeks or monthly. The median for senior kindergarten teachers lies between 2 weeks and monthly: it is slightly more frequent for junior kindergarten teachers. In the senior kindergarten classes, 10 percent claim to record progress daily; 12.5 percent weekly; 25 percent every two weeks; 17.5 percent monthly; 2.5 percent at half-term and 25 percent at the end of term. In the junior kindergarten classes, 7.1 claim to record progress daily, 14.3 percent weekly; 21.4 percent every two weeks; 14.3 percent monthly, 7.1 percent at half term and 28.6 at the end of term. These findings suggest a tremendous variation in the frequency judged to be valuable by teachers in recording individual children's progress. They suggest that, in many instances, teachers must rely on memory and anecdotal report to keep check of the progress of individual children in the class.

The progress of the whole class is recorded less frequently on average than is the progress of the individual child. The median frequency is monthly, for both senior and junior kindergarten teachers.

For the senior kindergarten teachers, recording of the progress of the whole class takes place daily 5.7 percent; weekly 5.7 percent; every two weeks 17.1 percent; monthly 20 percent; at half term 5.7 percent and at end of term 28.6 percent of teachers.

For junior kindergarten teachers, frequency of recording is: daily 7.1 percent; weekly 7.1 percent; every two weeks 28.6 percent; monthly 14.3 percent; at half-term 7.1 percent and at end of term 7.1 percent.

In general, the junior kindergarten teachers tend to record progress (both individual and class) slightly more frequently.

The teacher was asked if she made special arrangements for
22.5.1 assessing particular skills and abilities. Responses were as follows (proportion of cases)

Senior kindergarten teachers claimed to make special arrangements as follows: for assessing cognitive skills 46.3 percent; assessing number concepts and skills 80.5 percent; assessing reading 9.8 percent; assessing listening skills 56.1 percent; assessing reading readiness 70.7 percent; and no special provision 12.1 percent.

Junior kindergarten teachers reported as follows: assessing cognitive skills 50 percent; assessing number concept 42.9 percent; assessing reading readiness 35.7 percent; assessing listening skills 28.6 percent; no special arrangement 28.6 percent; reading skills 0%.

There appears to be more emphasis in the senior kindergarten classes on assessing number concepts/skills. This reflects the educational objectives and classroom practices in this group(see discussion in later chapter). It is of interest that the senior kindergarten classes stress reading readiness and listening skills, whereas junior kindergarten classes stress reading. One wonders why there is relatively little attention to assessing listening skills, which should be a very important basic ability, in the junior kindergarten.

The teacher was also asked if she made special arrangements for

22.5.2 assessing the progress of specific groups of children.

Responses were as follows (proportion of cases responding)

Senior kindergarten: children with learning difficulties 61.5 percent; behavioural problems 41 percent; slower children 35.9 percent; brighter children 33.3 percent; unsettled children 12.8 percent, and no arrangement 28.2 percent.

Junior kindergarten: children with learning difficulties 28.6 percent; behavioural problems 42.9 percent; slower children 28.6 percent; bright children 7.1 percent; unsettled children 28.6 percent, and no arrangement 57.1 percent.

Clearly the junior kindergarten teachers attach more importance to assessing the progress of children who are unsettled or have behaviour difficulties and less to assessing bright children. This emphasis reflects the concern of the junior kindergarten to get children settled and manage their behaviour. By contrast, the senior kindergarten teachers were much more concerned with children who had learning difficulties, with slower and brighter children, but saw less of a problem with unsettled children.

22.5.3 Report Cards and Reporting to Parents

The manner of reporting children's progress to parents is an important but open question. The use of formal report cards for young children may not be considered appropriate by some, but parents appear to wish for such reports (see Part I of the report) Whereas only 50 percent of teachers of junior kindergarten children claim to use report cards, 97.7 percent of teachers of senior kindergarten do so.

This seems to reflect the greater formality and concern with demonstrable progress among teachers of senior kindergarten children.

However, report cards are said to be in standard form throughout the board by 85.7 percent of junior kindergarten teachers but by contrast in standard form by 59.5 percent of senior kindergarten teachers. The requirement that one use a standard form of report card may be related to the fact that only half of junior kindergarten teachers report they use such a card.

Confirming the above proportions of use is the fact that 44.4 percent of junior kindergarten teachers claim to have a choice as to which form of report card they use, whereas 54.8 percent of senior kindergarten teachers claim to have this choice.

There is no great enthusiasm about the format of the report card used. In the senior kindergarten teachers, 21.4 percent liked the format of their report card very much; 54.8 percent thought it adequate and a significant proportion, 24.3 percent considered it could be improved.

In the junior kindergarten group, 14.3 percent liked the format very much, 57.1 percent considered it adequate and 28.6 percent considered it could be improved. They were slightly less positive, overall. However, nobody disliked the format intensely.

Responses to other questions illustrate or qualify these replies.

Asked if there were any additions or changes to the report card they would like to see, very similar proportions of senior kindergarten teachers (37.8 percent) and junior kindergarten teachers (37.5 percent) agreed they would like to see changes. This is a very substantial number of teachers.

Asked whether the report card gives a good assessment of the child, the senior kindergarten teachers had a more positive evaluation:

40 percent considered the report card gave a good assessment; 40 percent considered it adequate, but 20 percent felt it could be improved to give a more accurate assessment of the individual child.

Among the junior kindergarten teachers, 28.6 percent considered the report card gave a good assessment; 57.1 felt it was adequate 14.3 percent felt it could be improved.

So roughly between 15 (lowest) and 30 percent (highest) considered that the format of the report card they used, a report card which was a matter of choice for only about half of them, needed improvement. The report card included the following features (proportion of cases responding)

22.5.4 Senior Kindergarten:

Anecdotal comments on child's development 92.9 percent; space for teachers comments 71.4 percent; notes on work habits/attitudes 66.7 percent; specific description of areas of program 59.9 percent; checklists of skills 52.4 percent; recommendations for action by the home 42.9 percent; effort ratings on child 26.2 percent; diagnostic recommendations 23.8 percent; rating scales 26.2 percent.

22.5.5. Junior Kindergarten:

Anecdotal comments 85.7 percent; space for teacher's comments 85.7 percent specific descriptions of areas of program 57.1 percent; notes on work habits/attitudes 42.9 percent; checklists 7.4 percent; effort ratings 14.3 percent; rating scales 14.3 percent; recommendations for action by the home 0 percent and diagnostic recommendations 0 percent.

The emphasis in these record/report cards therefore seems to be on anecdotal comments, teachers' comments and specific descriptions of areas of program. Checklists are used to a remarkably high degree, especially in the junior kindergarten report cards. There is a discrepancy here, since the junior kindergarten teachers' replies to an earlier question indicated that they did not favour the use of formal checklists.

It is also of interest to see that there is little provision on these report cards for diagnostic recommendations to assist the child. In view of the interest of junior kindergarten teachers in establishing relationships with the home, it is strange to find that the report cards provided for their use do not make it possible for them to make recommendations for action by the home.

One can see, in the answers to this question some of the possible reasons for teachers' dissatisfaction with report cards.

It was observed earlier that the senior kindergarten teachers were the ones more concerned with assessing brighter children. Teachers were asked what arrangements they made to deal with very 22.5.6 bright or advanced children.

Senior kindergarten (proportion of cases) reported as follows: enrichment provided in the classroom 87.5 percent; no special arrangements or acceleration, both 5 percent; enrichment in another class 2.5 percent.

Junior kindergarten responded as follows: enrichment in the classroom 71.4 percent; no special arrangement 28.6 percent.

Teachers therefore believe that they provide for the needs of the very bright or advanced child by enrichment within their own program.

A parent interview is claimed to be part of the reporting to parents in all junior and senior kindergarten classes in this sample. All found this parent interview a worthwhile form of communication.

The parents' perception of the kind of reporting of children's progress they had received by the end of the first term in school is recorded in Part I of this report; there, it was made clear that a high proportion of parents would have liked both formal report cards and personal interviews, but felt that they had not had personal interviews. Certainly the number reporting that they had had interviews was far below the 100 percent claimed by teachers here.

22.5.7 Defining Children with Special Needs/Learning Difficulties

Teachers were asked what proportion of the class usually found it hard to cope with school and were likely to be held back.

Among the junior kindergarten teachers, 14.3 percent said there were none; the majority of teachers, 64.3 percent, estimated the proportion as 1 - 2 percent of the class; 14.3 percent of teachers estimated it was 3 - 5 percent and 7.1 percent estimated it was more than 8 percent. Among senior kindergarten teachers, the estimates were: 14.6 percent none; 51.2 percent of teachers estimated 1 - 2 percent; 24.4 percent of teachers estimated 3 - 5 percent; 9.8 percent of teachers estimated 6 - over 8 percent.

A related question was, approximately what percentage of children in the class appeared to be in need of special supervision/resources of special education by the end of the year.

Among the junior kindergarten teachers again, as many as 14.3 percent estimated there were none; 42.9 percent of teachers estimated there were 1 - 2 percent; 21.4 percent of teachers estimated there were 6 - 8 percent. Among the senior kindergarten teachers, 20 percent of teachers estimated there were none; 51.2 percent of teachers estimated there were 1 - 2 percent; 15 percent of teachers estimated there were 15 percent; 2.5 percent of teachers estimated there were 6 - 8 percent; 4.7 percent of teachers estimated there were 9 - 12 percent and 2.5 percent of teachers estimated there were more than 12 percent.

In all instances above, the median estimate of children unable to cope or in special need fell between category 1 and 2 i.e. between none and 1 - 2 percent. This estimate will obviously vary from school to school and area to area depending on the circumstances; clearly there will be higher estimates of failure to cope or of special need in areas such as "inner city" neighbourhoods. However, the estimates appear very low, in view of previous research studies on complete age cohorts of children, such as those of Pringle et al. (1965) which suggest that by age 7 years, about 6 - 7 percent of children are already in difficulties or receiving special educational treatment and another 6 - 7 percent are judged by teachers and principals of "infant schools" (i.e. for children aged 5 - 7 years of age) as also needing special help. A recent authoritative study in Britain of special education and the needs of handicapped individuals (Warnock Report, May 1978) claimed that in total 16 percent of the school population would at some time or other display "special needs" requiring additional or specialized instruction, guidance or program. The present estimates of possible "special need" therefore appear optimistic; they may be part of the tendency observed in this study for teachers to be biased towards favourable estimates of children's abilities and progress, or of reluctance to conclude that a child has special needs sufficient to cause worry. One outcome of this kind of judgment or reluctance to perceive special need could be the strong tendency in the school system to pass children to the next stage or give "social promotion" through the grades.

The final question in this group is interesting, since it may reveal a significant discrepancy with the judgments above. Teachers were asked to say whether any of the 3 children in the sample selected from their classroom was in one of the categories (of special need).

In the junior kindergarten, 72.7 percent stated that none of the sampled children were in this category; but 18.2 percent of teachers reported 1 child and 9.1 percent reported 2 such children.

In the senior kindergarten, the estimates of "special need" were higher: 63.7 percent of teachers reported no such children; but 31.4 percent reported 1 child in the sample as having special needs and 2.9 percent reported 2 such children.

A "guesstimate" of the incidence of children with special needs may be obtained as follows. In the senior kindergarten, 1 child in 3 (33 percent) was perceived as having special needs by 31.4 percent of teachers. An acceptable assumption is 1 child in 3 would apply to the whole class, if there has been random sampling. The next assumption (which is certainly more of a guess) is that, if 31.4 percent of teachers make a given estimate, then the total (100 percent) might make an estimate which would average out to approximately one third of the given estimate.

That is, the given estimate for the subsample of teachers is multiplied by their proportion of the whole population of teachers, (i.e. by .314)

This approach suggests that a guesstimate of the incidence of special need as perceived by senior kindergarten teachers is .33 (33 percent) multiplied by .314 (31.4 percent) i.e. 10.4 percent.

A similar guesstimate for the junior kindergarten teachers is: .33 (33 percent of children) multiplied by .182 (18.2 percent). That is, 6 percent of children in special need.

These estimates are much nearer the figures previously established from previous studies in complete school populations.

Even apart from the above estimates, it is of interest that so high a proportion of the actual children sampled are said by their teachers to be likely to find it hard to cope in school or to have special needs e.g. nearly one third of the senior kindergarten sample. It might be noted that the estimate for the senior kindergarten (31.8 percent claiming 1 child with special needs) is nearly twice that for the junior kindergarten (18.2 percent); this is despite the fact that the junior kindergarten sample should have contained a higher proportion of "inner city" children who would be expected to have a greater proportion of problems in coping or to have special needs. On the other hand, it may be that the special needs of children are more evident a year later, in senior kindergarten, than they are when children are aged 4.

CHAPTER 23 – PARENT – TEACHER RELATIONS

23.1.0 Meetings with Parents

The teacher first meets the parents of children in her class as follows:

23.1.1 Senior Kindergarten teachers meet parents: - at an open house, 17.9 percent; contact with parent initiated by teacher 17.9 percent; contact initiated by parent 14.1 percent; a fall meeting set up by the teacher at the school 13.5 percent; a visit to the school while the class is in session 12.8 percent; at kindergarten registration in spring 12.2 percent; a spring meetings at the school set up by the teacher 4.5 percent; and a visit to the home 3.2 percent.

23.1.2 Junior Kindergarten teachers meet parents first: - at an open house 20.8 percent; the registration meeting in spring 16.7 percent; a fall meeting arranged by the teacher 12.5 percent; a visit to the school by parent; home visit, personal contact initiated by teacher or contact initiated by parent, 10.4 percent each.

There is some reliance on the "open house" to make contact with parents, as noted by parents in their comments on parent-teacher contact (Part 1 of the report).

23.1.3 For the senior kindergarten teachers, the most effective method of meeting parents was: a visit by parent to school while the class is in session, 26.2 percent, followed by personal contact as need arises, initiated by teacher, 23.8 percent; the fall meeting with parents set up by the teacher, 21.4 percent; and an open house for the whole school, 11.9 percent. Other forms of contact accounted for only 4.8 to 2.4 percent of cases; a visit to the home accounted for only 4.8 percent.

23.1.4 For the junior kindergarten teachers, the most effective method was the fall meeting set up by the teacher, 28.6 percent; other methods ranked close together in effectiveness: meeting at the kindergarten registration in spring, 21.4 percent; a visit to the home, 21.4 percent; and an open house on a school-wide basis, 14.3 percent.

It will be noted that the junior kindergarten teachers attach more importance to a home visit. It will be recalled that home visiting by teachers had a low priority as a method of establishing teacher-parent relationships according to the principal's evidence. (See Part II of the report.)

23.2.0 Teachers were asked what they sent home with the child, if anything, at the end of the first week in school.

Among senior kindergarten teachers the responses were (proportion of cases responding): a sample of the child's work 76.2 percent; letter to parents 64.3 percent.

Junior kindergarten teachers: sent home a sample of the child's work 78.6 percent and a letter to parents 28.6 percent.

There appears to be reasonably good communication from school to home at the end of the first week. It is of interest that the senior kindergarten make more use of a letter to parents; this may, once again, indicate that their relationship to parents is slightly more formal than that of the junior kindergarten teachers.

23.3.0 Communication with Parents

The form of communication with parents most used during the school

23.3.1 year was as follows: Senior kindergarten: newsletter sent home 31 percent; parent interview at the school 26.2 percent; telephone contact 16.7 percent; talk with the parents when they bring the child to school

14.3 percent; encouraging the parents to drop in 7.1 percent; and other methods 4.8 percent.

23.3.2 Junior kindergarten: talk with the parents when they bring the child to school 35.7 percent; newsletters sent home 35.7 percent; telephone contact 14.3 percent; encouraging parents to drop in 7.1 percent and parent interview at school 7.1 percent.

Both groups share a faith in the efficacy of a newsletter sent to the home, but the junior kindergarten teachers' responses suggest a readiness to entertain a more direct or informal contact with parents. Neither group appears to favour encouraging the parents to drop in; the teacher-parent relationship appears to be viewed as fairly firmly in the hands of the teacher.

The form of contact found most effective among the above was:

23.3.3 Senior kindergarten teachers: the parent interview at school, 50 percent; newsletter sent home 21.1 percent; encouraging parents to drop in 13.2 percent; followed in frequency by talking to the parents when they bring the child to school, 7.9 percent and telephone contact 5.3 percent.

23.3.4 Among the junior kindergarten teachers the most effective methods were judged to be: talking with parents when they bring a child to school 38.9 percent; parent interview at school 23.1 percent; encouraging parents to drop in, or newsletter, both 15.4 percent; and telephone contact 7.7 percent.

The face-to-face contact was therefore felt to be the most effective form of communication.

23.4.0 Topics Discussed with Parents

What is discussed most with parents is as follows: Two choices

23.4.1 were requested. Senior kindergarten teachers: the child's progress

34.6 percent; the child's developmental level (cognitive and behavioural skills) 23.1 percent; the child's reaction to school 19.2 percent; questions about changes in the child's circumstances 15.4 percent; and questions about the home situation 7.7 percent.

23.4.2. Junior kindergarten teachers: the child's progress 44.2 percent; the child's developmental level 22.1 percent; the child's reaction to school 17.4 percent; questions about the home 8.1 percent, changes in the child's circumstances 5.8 percent.

Both groups agree in seeing the major topics as being the child's progress or level of development; discussion of the home situation is a minor concern. This again underlines the repeated finding in this study that the school has relatively little direct contact with the home as such, rather than the teacher and parent making contact in a school situation.

23.5.0 Parents as Classroom Volunteers

In senior kindergarten classroom, 18.2 percent of teachers have more than one parent volunteer helping at one time; in junior kindergarten classrooms, by contrast, 42.9 percent of teachers report having more than one parent volunteer working with them at one time. This may illustrate one aspect of the difference between senior and junior kindergarten; it may reflect the greater needs of the younger children for adult stimulation and guidance, but it equally reflects the greater readiness or flexibility of the junior kindergarten teacher in making use of volunteers.

The use of parent volunteers was felt to improve parent-teacher communication by the majority of both senior and junior kindergarten teachers (senior kindergarten 80.6 percent, but with 12 cases missing; junior kindergarten 88.9 percent, but with 5 cases missing).

The role of parent volunteers was perceived as follows:-

23.5.1 Senior kindergarten teachers saw the important roles as - providing help with field trips and special events 41.7 percent; providing individual assistance to those who cannot cope with large groups 20.8 percent;providing enrichment for the program by tapping resources in the community 20.8 percent; relieving teachers of non-professional chores 12.5 percent; and lunch supervision duties only 4.2 percent.

23.5.2 Junior kindergarten teachers saw the important roles as: providing help with field trips 36.3 percent; providing individual assistance to children who cannot cope with large groups 30.8 percent; relieving teachers of non-professional chores 16.5 percent and enrichment of the program by tapping outside resources 15.4 percent.

The two groups perceived the use of parent volunteers in essentially the same manner. It is of interest, however, to note the emphasis placed by kindergarten teachers on using parents to help with field trips as compared with using them to instruct or stimulate children.

23.6.0 Work Sent Home, and Special Events for Parents

23.6.1 Work is sent home with the child daily by 33.3 percent of senior kindergarten teachers, weekly by 45.2 percent and once a month or so by 21.4 percent. Junior kindergarten teachers send work home daily 63.6 percent; weekly 18.2 percent and at longer intervals than monthly 18.2 percent.

Explanation of the work or the child's activities are sent home regularly by 33.3 percent of senior kindergarten teachers; occasionally by 45.2 percent. Explanations of work are sent home regularly by 23.1 percent of junior kindergarten teachers and occasionally by 46.2 percent.

Thus, the child's work is sent home with the child very frequently (every day or week) but explanations of the purpose or nature of the activity rather less frequently.

It is claimed by the majority of teachers that they make sure that the work is actually taken home by the child and not left in school 97.3 percent senior kindergarten and 100 percent junior kindergarten teachers.

23.6.2 Special events involving pupils and parents are arranged once a term or more often by 61.9 percent, and once or twice a year by 38.1 percent of senior kindergarten teachers. They are arranged once a term or more often 53.8 percent made once or twice a year by 46.2 percent of junior kindergarten teachers. It is of interest to compare these estimates with those given by the principal in his evidence on the frequency with which the school organizes special events or meetings for parents (See Part II of the report).

Responses to previous questions suggest that parent-teacher contacts are mainly within the school and at the initiative of the teacher at specific times and by arrangement rather than by the parent dropping in or visiting the school.

This is confirmed by the following answers on whether the parent is encouraged to observe the class: 63.4 percent of senior kindergarten teachers reported that they did this at specific times; 22 percent did so at any time; 9.8 percent said it was not a policy of the school to encourage parents to drop in and 4.9 percent said that the practice was too disruptive. 23.7.0

Similar patterns of response were found in the junior kindergarten teachers: 64.3 percent encouraged parents to drop in to observe the class specific times; 28.6 percent said it was encouraged at any time and 7.1 percent reported it was not the policy of the school to encourage this practice.

Thus, the majority of kindergarten teachers encourage parental visiting too and observation of the child's classroom but at defined times, under the control of the teacher, much as in the arrangements for teacher-parent contact. It might be noted that a small but significant proportion of schools (up to 10 percent) did not have as a policy the encouragement of parents to visit classrooms.

CHAPTER 24 – THE ORGANIZATION AND EQUIPMENT OF THE CLASSROOM

24.1.0 The kindergarten classrooms were practically all self-contained.

Among the senior kindergarten classrooms, 62.8 percent were described as self-contained and 23.2 percent primarily self-contained with considerable use of the hall or other shared space. "Open concept" defined as a large open space with much interaction among various teachers and groups of children who share the space accounted for 11.6 percent of classrooms, and "open concept" as a large open space but with class groupings staying fairly separate accounted for only 2.3 percent.

Junior kindergartens had 50 percent completely self-contained classrooms; 35.7 percent primarily self-contained with use of other space; and 7.1 percent each for the two uses of open space (separate classes and interaction among teachers and groups of children).

The low percentage of classes which are not self contained corresponds to the estimate given in the principal's evidence (see Part II of the report).

24.1.1 Play Areas

Play areas for kindergartens were as follows: Senior kindergartens had 29.3 percent of classrooms opening on to a special kindergarten play area; 17.1 percent use of a special play area set aside for primary grades and 53.7 percent in which the play area is part of the large school yard.

24.1.2 Junior kindergartens had 23.1 percent of classrooms opening on to a special play area; 15.4 use of a special play area for primary grades and 61.5 percent in which the play area is part of the large school yard.

From this, it appears that kindergarten classrooms are usually not so designed that they have the special play area required for young children, but are in effect attachments to the main elementary school.

24.1.3 Outdoor play equipment was described as follows:

In senior kindergartens, 19.5 percent of outdoor play equipment was described as excellent; 43.9 percent as average and 36.6 percent as not very good.

In junior kindergartens, 28.6 percent of outdoor play equipment was described as excellent; 64.3 percent as average and 7.1 percent as not very good.

There is a clear-cut difference in the perceived quality of senior and junior kindergarten outdoor play equipment; the impression from the answers to this question is that senior kindergartens are not well served in terms of outdoor play equipment. Possibly, play equipment is seen as not so essential for the older children.

24.2.0 School Facilities

Teachers were asked to check off the facilities in their school.

24.2.1 Practically all schools had a gym (though 7.3 percent of senior kindergarten teachers reported their school did not have a gym). Among senior kindergarten classes, 75.7 percent use the gym regularly; among junior kindergarten classes, only 57.1 percent.

24.2.2 No school had a swimming pool.

24.2.3 A minority of schools had music rooms: 29.3 percent among the senior kindergarten group and 14.3 percent among the junior kindergarten group; among the senior kindergarten group 4.7 percent used a music room, and among the junior kindergarten group 14.3 percent.

24.2.4 Roughly a quarter of schools had an adventure playground: 22.5 percent among senior kindergarten groups and 28.6 percent among junior kindergarten groups.

Among the senior kindergarten groups 14 percent, and among the junior kindergarten group 28.6 percent used the adventure playground.

24.2.5 Practically all schools had a library, though 7.1 percent of the junior kindergarten teachers reported their school did not have one. Among the senior kindergarten classes 82.5 percent used the library regularly; among the junior kindergarten class 76.9 percent used the library regularly.

Among senior kindergarten groups, 33.3 percent of schools had a

24.2.6 lunchroom; among junior kindergarten groups, 41.7 percent had a lunchroom. The lunchroom was used by 9.3 percent of senior kindergarten classes (32 cases missing) and by 42.9 percent of junior kindergarten classes (the other 8 cases missing).

In summary, it appears that most schools have a gym and library, and that these are used by the kindergarten children; however, junior kindergarten use the gym less. This may be because (as suggested by the answers to a previous question) they have better outdoor play equipment of their own. However, this still raises the question of the need of junior kindergarten children for a comprehensive and creative experience of physical education.

It seems that junior kindergarten classes tend to use special facilities such as a music room and adventure playground more than senior kindergarten classes.

24.3.0 Learning Centres and Equipment

Teachers were asked to indicate the equipment available in a variety of learning centres;

24.3.1 Gross Motor Centre

For senior kindergarten classes, climbing equipment was always available in 56.4 percent,and sometimes in 38.5 percent of cases; for junior kindergarten classes, climbing equipment was available always in

92.9 percent and sometimes in 7.1 percent of cases.

For senior kindergarten classes, large building toys were available always in 85.7 percent of cases and sometimes 7.1 percent of cases; for junior kindergarten classes, large building toys were always available in 100 percent of cases. In this area of activity, junior kindergarten classes appear to be better equipped.

24.3.2 Science Centre

Senior kindergarten classes had the following: pets, aquarium always available 30.8 percent and sometimes available 38.5 percent; growing centre (plants, seeds, etc.) always available 14.6 percent and sometimes 68.6 percent; nature objects (shells, pine cones, etc.) always available 48.8 percent and sometimes available 41.9 percent; sand and water play always available 78 percent and sometimes available 17.1 percent; other objects such as magnets, magnifying glasses, etc. always available 53.7 percent and sometimes 46.3 percent.

Junior kindergarten classes had the same items as follows: pets, aquarium always available 53.8 percent and sometimes 23.1 percent; growing centre always available 30.8 percent and sometimes 61.5 percent; nature objects always available 57.1 percent and sometimes 42.9 percent; sand and water always available 85.7 percent and sometimes 14.3 percent; scientific objects/equipment e.g. magnets, magnifying glass - always available 57.1 percent and sometimes 42.9 percent.

There is a clear trend for junior kindergarten classes to have a greater variety of "science" objects and equipment always available. It is surprising to find that such a low proportion especially of senior kindergarten classes have a reasonable variety of equipment to stimulate observation and experiment by young children.

It was noted that parents rated environmental studies and related science activities low in their list of educational goals, and that day-care and nursery schools also were described by parents as having poorer equipment and program in the science/environmental study activity areas.

Direct observation by the research team confirmed the impression that many kindergarten classes did not have very effective or varied provision for science, nature or environmental study, and that centres were quite often poorly equipped or organized or seemed to serve a token function. Ratings of use of activity areas - centres by teachers and by the research team confirmed that science-environmental study activities are significantly lower than other activities such as motor, manipulative and language.

24.3.3 The Quiet Centre

A quiet centre was defined as one in which quiet manipulative activities e.g. using puzzles, educational toys took place, or quiet board or card games, etc. might be played, or where children might look at books or "write". Among senior kindergarten classes, all had at least 15 books always available, games were always available in 95.3 percent of cases and sometimes in 4.7 percent; writing materials were always available in 95.3 percent of cases and sometimes in 4.7 percent; language activities such as cut-out letters and language games were available always in 92.9 percent of cases and sometimes in 4.8 percent; puzzles and educational toys were always available in every instance.

Among junior kindergarten classes: games were always available in every instance; writing materials were available always in 78.6 percent of cases and sometimes in 14.3 percent; language activities/games were always available in 69.2 percent of cases and sometimes in 23.1 percent; puzzles/educational toys were always available in every instance.

There is better provision of writing and language materials in senior kindergarten classes, probably reflecting the teachers' perception that these activities are more appropriate for the older children.

24.3.4 The Math Centre

Provision by senior kindergarten classes was as follows: math games (cards, dice, dominoes, classifying activities, etc.) always available 97.7 percent, sometimes available 2.3 percent; measuring equipment, always available 50 percent, sometimes 47.6 percent; 3-dimensional geometrical shapes always available 53.7 percent and sometimes 36.6 percent; blocks, Cuisenaire or Stern rods, etc., always available 76.2 percent, sometimes 19 percent.

Provision by junior kindergarten classes was as follows: math games always available 85.7 percent, sometimes 7.1 percent; measuring equipment always available 53.8 percent, sometimes 38.5 percent; 3-dimensional shapes always available 75 percent, sometimes 8.3 percent; blocks and rods always available 78.6 percent, sometimes 7.1 percent.

The junior kindergarten classes appear to have slightly more measuring equipment and concrete materials such as geometrical shapes.

It is interesting to find such a relatively low provision of practical equipment/activity material,such as for measuring,in classes for 4 and 5 year olds where preliminary, concrete activities in "measuring" is known to be appropriate. Taken together with the high level of provision for mathematical games such as dominoes, cards, etc., which are viewed by some experts in early childhood education as a secondary, more formal and abstract level of mathematical activity for the young child, these findings suggest that mathematical activities in the kindergarten do not emphasize exploration of concrete, experimental material as much as mathematical games, counting and arithmetical practice, i.e. the more formal and traditional approach.

Evidence from teachers' rating of children's activities (in a previous chapter) and direct observation by the research team would confirm that less emphasis is placed on math and arithmetic than on large-motor, manipulative "creative" and language activities.

24.3.5 The Creative Centre

This is a rather misleading title for the group of activities which involved exploration and manipulation of paint and possibly clay, sand and a range of other materials in order to express oneself and master materials and skills.

Among the senior kindergarten classes: easels and paints, etc., were always available in every instance; carpentry tools were always available in 34.1 percent and sometimes in 56.1 percent; clay, sand, etc., were always available in 66.7 percent and sometimes in 31 percent.

Among the junior kindergarten classes: easels and paints were always available in every instance; carpentry tools, etc. were always available 46.2 percent and sometimes 46.2 percent; clay and sand were always available 78.6 percent and sometimes 21.4 percent.

Once again, the junior kindergarten classes have a slightly better provision and variety of provision in the "creative" activities.

It is of interest that every class has, as a matter of convention, easels and paints. However, distinctly fewer have a wider range of materials or equipment for creative and exploratory work such as use of wood (using tools) or for a variety of art materials additional to paint. It was noted by the research team that only one or two classes made real clay available to children. It is surprising to find that sand play is not found in all classes as a possible part of creative activity. These findings suggest that the range of materials (and therefore of opportunities for experience exploration and manipulation) is likely to be restricted, and that much of the "creative" activity in kindergarten classes may be finger painting, easel painting and cutting and pasting.

24.3.6 Role Playing Centres

This is another important area of creative and fantasy play for young children.

Among senior kindergarten classes: "house equipment" was always available in every instance; a dressing up area and materials were always available 31 percent, and sometimes 59.5 percent.

Among junior kindergarten children: "house" equipment was always available in every instance: as was the dressing up area and materials; "store" play equipment was always available 28.6 percent, sometimes 57.1 percent.

As might be expected from the importance of this role play and imitative play activity for young children, the conventional house corner and dressing up materials are always available. However, provision does not seem to be made for other varieties of role play, e.g. "shopping",which is equally valid and attractive and might well be used as a base of experience for later practical work in math or social arithmetic.

The picture is one of a rather conventional approach to provision for role play.

24.3.7 Music and Listening

Among senior kindergarten classes: a tape recorder and tapes were always available 52.4 percent, sometimes 42.9 percent; a record player and records were always available 90.7 percent, sometimes 9.3 percent; earphones were always available 48.8 percent and sometimes 48.8 percent; a slide and film-strip projector was always available 58.1 percent and sometimes 41.9 percent.

Among junior kindergarten classes: a tape recorder and tapes were always available 46.2 percent, sometimes 30.8 percent; a record player was always available in every instance; earphones were always available 53.8 percent, sometimes 30.8 percent; a slide and film-strip projector was always available 57.1 percent, sometimes 35.7 percent.

The kind and variety of provision of audio-visual aids appears much the same for both senior and junior kindergarten classes. It is evident that a record player and records are always available, but that it is distinctly less usual for a class to have available (or possibly to use) a tape recorder or a slide/film-strip projector. This provision suggests that "music" and "listening" activities may follow a fairly conventional pattern, if related to records, and that a high proportion of classes do not have available equipment for more flexible and possibly creative approaches to music (reproduction, recording of music and sound by children, use of training tapes for listening activities, etc.)

24.3.8 The total number of items of equipment available was tabulated. For the senior kindergarten the mean "score" was 17.98 (out of a possible 26) with a standard deviation of 3.7. For the junior kindergarten, the mean "score" was 18.93, with a standard deviation of 4.3. The slight difference in means confirms the impression gained from these comparisons of equipment, that the junior kindergarten classes tended to have a slightly higher level or greater variety of provision.

In summary, the teachers' description of equipment and materials available in various centres of activity tends to support previous observations on the preferred pattern of activities and indirectly illustrates how learning by young children is viewed and defined.

24.4.0 Equipment for Teachers' Use

Teachers were asked what equipment was available for their use.

24.4.1 Among senior kindergarten teachers, 7.1 percent had daily, 7.1 had weekly and 61.9 had occasional use of a television set.

Video equipment was available daily to 7.7 percent, weekly to 25.6 percent and occasionally to 38.5 percent.

A tape recorder was available daily 30.2 percent, weekly 20.9 percent and occasionally 44.2 percent.

A piano was used daily by 73.8 percent, weekly by 2.4 percent and occasionally by 16.7 percent.

Other musical instruments had a low frequency of usage: daily 25.6 percent, weekly 16.3 percent and occasionally 46.5 percent.

24.4.2 Among junior kindergarten teachers, 14.3 percent had daily, and 64.3 percent had occasional use of a television set.

Video equipment was available daily 28.6 percent, weekly 7.1 percent and occasionally 42.9 percent.

A tape recorder was available daily 21.4 percent and occasionally 78.6 percent.

A piano was used daily by 42.9 percent, weekly by 21.4 percent and occasionally by 14.3 percent.

Other musical instruments were used daily 35.7 percent, weekly 14.3 percent, occasionally 42.9 percent.

The availability of equipment does not, of course mean that it is used or is feasible to use. However, the pattern of response to the above questions is interesting. It suggests that little use is made by kindergarten teachers of television, and even less of video equipment (for local and school programs, recording children's activities, etc.)

There is more use of the tape recorder, but even so in only a third to a quarter of classes.

There is considerable use of the piano in senior kindergarten classes; this suggests that the piano is being used for fairly conventional purposes - such as accompanying children's singing; by contrast, there seems to be distinctly less use of the piano in the junior kindergarten classes. It is also of interest that there is relatively restricted use of musical instruments other than the piano and that other musical instruments are more frequently used in the junior kindergarten. Use of other musical instruments would give a variety of musical experience which seems to be lacking in some senior kindergarten classes in particular, according to this evidence.

Teachers reported on the basic equipment in their classrooms.

All classrooms(senior and junior) had moveable chairs and tables which would permit varied and flexible grouping of children for activities. Among senior kindergarten classrooms, 71.4 percent had a storage compartment for each child but among junior kindergarten classrooms the proportion was lower - 64.3 percent. It would seem important that, whatever the arrangement, each child should have some sense of a personal base, as would be implied by having a storage compartment (whether in a desk or located elsewhere).

CHAPTER 25 – EDUCATIONAL OBJECTIVES AND VIEWPOINTS

25.1.0 Educational Objectives

Educational aims and objectives should govern the selection of learning situations, content of learning, materials and techniques of instruction. They should be a guide to teacher and school in planning what is to occur in the classroom, evaluating the outcome and modifying learning and instruction to meet the needs of the children. Thus, choice of objectives by teachers should give insight into what they consider important and be related to their practice in the classroom. On the other hand, there may be a discrepancy between intentions and practice, or between what is planned and what is executed. These discrepancies between objectives and practice - or indeed, discrepancies between objectives themselves - are also of interest in casting a light on teachers' beliefs and on what actually occurs in classrooms, as contrasted with what is believed to occur.

25.1.1 Ranking of Educational Objectives

Teachers were asked to check a list of 18 widely cited objectives on pre-primary education, drawn from the Circus testing materials. They were asked to indicate the relative importance of each objective by assigning it to category 3 if it was among the most important or critical, to category 2 if it was of secondary importance and to category 1 if it was among the least important. In addition teachers were asked to choose the three most important and the three least important objectives.

In order to simplify reporting and discussion, the results are presented in terms of the percentage choosing each objective as most important or critical; in addition, a rough scoring system was devised by multiplying the percentage in category 3 (most important) by 2, the percentage in category 2 (secondary importance) by 1 and the percentage in the category of lowest importance by 0.

The resulting weighted percentage was divided by 10 to reduce it to a score ranging from 1 to 20. This scoring suffices to make comparisons between objectives or to compare the responses of two groups such as the senior kindergarten and junior kindergarten teachers.

Test results for the senior kindergarten teachers were as follows:-

The objective given highest priority was:

1. Abilities to cope with cognitive-intellectual demands (e.g. attention, initiative and curiosity, positive attitudes to learning) chosen by 95.3 percent as important/crucial and having a score of 19.3.

2. Next came Abilities to cope with personal-social demands (e.g. impulse control, sense of self-identity and personal worth, ability to express feelings and respond to others; ability to co-operate or collaborate; ability to cope with competitive situations) chosen by 93 percent and having a score of 19.1.

3. Next, Productive language skills (fluency of speech, ability to describe or tell a story) chosen by 86 percent and with a score of 18.6.

4. Next, Receptive Language Skills (comprehension of words, sentences, ability to follow directions) chosen by 83.7 percent, with a score of 18.4.

5. Next, Creating good feelings about learning and school in the child, chosen by 90.7 percent, with a score of 18.1.

6. Next, Physical and motor skills, chosen by 81.4 and scored 17.4.

7. Next, Visual discrimination (ability to match shapes, discern patterns, recognize colours), chosen by 72 percent, score 17.

8. Equal with #7, Sensitivities and appreciations (enjoyment and appreciation of diverse experiences, respect for and interest in

differences among people, enjoyment of play and humour, aesthetic appreciation) chosen by 72 percent, score 17.

9. Problem solving abilities (including classification skills) chosen by 69 percent, score 16.4.

10. Creativity, imagination, capacity for fantasy chosen by 65 percent, score 16.3.

11. Understanding of quantitative and number concepts, chosen by 60.8 percent, score 16.

12. Auditory discrimination (phonetic) chosen by 53.7 percent, score 15.3.

13. General information about health and safety, the physical and social environment chosen by 44.2 percent, score 13.7.

14. Recognition of letters and numbers, chosen by 39.5 percent, score 13.

15. Equal with #16 Art and craft skills, chosen by 25.6, score 9.8.

16. Ability to form letters and numbers and copy geometric figures chosen by 20.9 percent, score 10.

17. Preparing the child for the next stage, chosen by 23.8, score 9.8.

18. Musical skills and understanding, chosen by 20.9 percent, score 9.1.

The objectives were rated as follows by junior kindergarten teachers: First, as with the senior kindergarten teachers.

1. Preparation for cognitive/intellectual demands, chosen by 92.9 percent, score 19.3.

2. Next, Productive Language, chosen by 92.9 percent, score 19.2

3. Receptive language, chosen by 85 percent, score 18.6

4. Equal with #4, Physical and motor skills, chosen by 85.7 percent score 18.6

5. Creative and imaginative abilities, chosen by 78.6 percent, score 17.9

6. Creating good feelings about learning, etc. chosen by 78.6, score 17.3

7. and 8 Preparation for personal-social demands and Sensitivity and appreciation, both chosen by 78.6 percent, score 17.2.

9. Visual discrimination, chosen by 71.4 score 17.1.

10. Forming letters, numbers and shapes, chosen by 50 percent, score 15.

11. General information about health and safety and environment chosen by 53.8 percent, score 13.8.

12. Auditory discrimination skills, chosen by 57.1 percent, score 13.6.

13. Problem solving and classification, chosen by 42.9 percent, score 12.8.

14. Art and craft skills, chosen by 28.6 percent, score 12.2.

15. Quantitative and number concepts chosen by 21.4 percent, score 10.7.

16. Musical skills and understanding, chosen by 21.4 percent score 10.

17. Preparing the child for the next stage, chosen by 14.3 percent, score 7.1

18. Recognition of letters and numbers chosen by 7.1 percent, score 7.1.

The ranking of objectives by senior and junior kindergarten teachers was very similar but not exactly the same. The rank order correlation is .86, which is high and significant.

It is noteworthy that both groups of teachers attach high importance to preparation of abilities to cope with cognitive-intellectual demands, with acquiring language, and creating good feelings about learning and school. The teaching of physical and motor skills ranked quite high, together with sensitivity and appreciation.

Both place musical understanding and skills, and preparing the child for the next stage very low in priority.

Problem solving is placed fairly low (from median for senior kindergarten to lower third for junior kindergarten), and general information about health, safety and the environment also comes out rather low (below median in both groups). Art and craft skills are also rated low.

Visual discrimination is seen as more important by both groups, but the relative importance of visual discrimination skills and auditory discrimination skills is much the same in both groups.

There are differences: quantitative and number concepts, ranked below median by the senior kindergarten teachers, is distinctly lower among the junior kindergarten teachers. Conversely, forming letters and shapes is just below median for junior kindergarten but near the bottom in priority for senior kindergarten. This would reflect the different needs and practices among junior kindergarten children, who may need specific experience with pre-writing skills, and senior kindergarten children, in whom these skills are better developed.

It is of interest to compare these rankings of objectives with the description of frequency of different activities undertaken by children given by teachers in a previous chapter, and the observations of use made by children of particular activity centres carried out by the research team.

It is also of interest to compare the rankings of objectives with the inferences that might be made from the description of available materials/equipment in different activity centres in the preceding chapter, and with the analysis of centre and group activities in a following chapter.

25.1.2 The Three Most Important Objectives

These were listed as follows by the senior kindergarten teachers:

(1) Abilities to cope with personal-social demands 77.5 percent;

(2) Creating good feelings about learning and school 65 percent;

(3) Cognitive-intellectual abilities 62.5 percent. These were followed, in order of importance, by:

Sensitivity and Appreciation 30 percent; and General Information on Health and Safety and Environment 17.5 percent.

They were listed as follows by junior kindergarten teachers:

(1) Abilities to cope with personal-social demands 85.7 percent;

(2) Creating good feelings about learning and school 57.1 percent;

(3) Cognitive-intellectual abilities 42.9 percent.

These were followed by:

(4) Receptive and Expressive Language Skills 28.6 percent apiece.

25.1.3 The Three Least Important Objectives

It is of interest, to sharpen up the contrasts already found in the ranking of objectives, to check on the three least-preferred objectives. They were listed as follows by the senior kindergarten teachers: (1) Music skills and understanding 48.7 percent; (2) Ability to form letters, etc. 46.2 percent and (3) Art and Craft and Preparation for the Next stage, each 38.5 percent.
General Information about Health and Safety, etc., which was lowest among the five best-preferred objectives, is also lowest among the five least-preferred, with a percentage choice of 23.1 percent; this result argues that this particular objective is more or less in the middle of the scale, or at the "indifference point" in terms of strong preference.

The least-preferred objectives were listed as follows by the junior kindergarten teachers:

(1) Ability to form letters, etc., 71.4 percent; (2) Preparing the child for the next stage 50 percent; (3) Recognition of letters and numbers 42.9 percent.

These were followed by: Musical skills and understanding 35.7 percent and Art and Craft skills 28.6 percent.

There is obviously strong agreement between the two groups on the importance of the objectives related to coping with personal social demands, creating good feelings about learning and school, and cognitive-intellectual abilities.

25.1.4 Discussion of Objectives in Senior and Junior Kindergarten

Musical skills and understanding ranks as of least importance in both groups. But it is of interest to find that dealing with letters and numbers (recognition and production) is perceived as such a low priority by kindergarten children. Clearly, the "reading/writing" abilities are of low priority and not seen as of crucial importance, especially in the learning of junior kindergarten children. Possibly, the teachers are in effect stating that the important concerns in the kindergarten are play activities, language and learning to learn about the environment (by developing curiosity, attention, etc.) or to cope with personal-social situations and not formal academic activities such as preparation for number, reading and writing for which children may not be seen as "ready".

It is of interest that teachers choose the most general and complex of objectives. The "personal-social" and "cognitive-intellectual" objectives are so general and comprise so many complex factors (e.g. attention, initiative curiosity, ability to express feelings, collaborate, respond to others or cope with competition) that anyone assenting to them is accepting a wide range and variety of activities which may or may not belong together or be feasibly related to specific activities and experiences. In effect, endorsement of these three general objectives is endorsement of the general philosophy of the early-childhood education movement, i.e., emphasis on the importance of experience and activity, and on developing social and personal as well as general cognitive skills.

However, there may be some discrepancies. The objective of developing problem solving strategies, using classification skills, etc, receives middling to low priority. Yet this might well be seen as a basic foundation for many of the "cognitive-intellectual" abilities to which high priority is given. In practice, the kindergarten classrooms observed in this study do not give high priority of provision of science or environmental study or similar observational/ exploratory/experimental activities. This is illustrated both in the teachers' analysis of activities in the classroom, the provision of particular centres and the direct observation of centres by the research team. It might be suggested that kindergarten teachers endorse general aims such as developing cognitive strategies and skills, but that their actual program may not give considerable emphasis to developing practical situations in which such abilities might be used and practised - or that the emphasis on cognitive-intellectual skills and personal - social skills is to be developed more indirectly in other areas of the program.

It is also of interest to see the fairly low priority given to quantitative/numerical experiences, which might also contribute to cognitive-intellectual skills (observation, experiment, reasoning).

The low priority for quantitative-numerical goals does agree with the pattern of children's activities reported by teachers for various activity centres or areas of program, and with the observation that there was an unexpectedly low occurrence of centres of teaching/learning materials which would give children opportunities for experimental work in math. (See previous chapter).

It is also of interest to compare the low priority assigned to art/ craft skills and the actual importance of "creativity" centres and activities which in fact emphasize painting, cutting and pasting. It may be that teachers see these latter centres as "creative" rather than as fostering specific skills, and that their low priority for art-craft skills may be based on response to the term "skills".

It is also of interest that such low priority was given to the general objective of "preparing the child for the next stage". This was one of the objectives offered by the Plowden Committee on primary education in Britain for consideration by its respondents. The Plowden committee also found that low priority was given to "preparing the child for the next stage" (of primary education). In one sense, the low priority given to this objective contradicts the choice of the objectives. It could be held that preparation for the next stage involved just those personal-social skills, and cognitive skills, and effective control of receptive and expressive language which are emphasized by these kindergarten teachers. Clearly, these teachers perceive preparing for the next stage as meaning the placing of demands on children for meeting the requirements of the following class, e.g. in specific skills, in reading, writing, math, etc., as contrasted with letting the child enjoy his present stage, undertake appropriate activities and "unfold" in development.

The "philosophy" of the kindergarten comes through quite clearly in the analysis of these objectives.

25.2.0 Educational Viewpoints

Educational viewpoints represent a set of statements with which the teacher was asked to agree or disagree. These were also adapted from the Circus materials for pre-school and young school age children. The statements represent a range of views commonly held or uttered about children, learning, programs and objectives.

Essentially, this part of the questionnaire taps opinions and attitudes. The assumption is that these attitudes will form a coherent, consistent scale or set of scales which will indirectly reflect the views of teachers of their programs and objectives and suggest the kinds of activities or classrooms these teachers would be likely to favour. (See the literature on attitude-testing and use of attitude scales). It is of interest to compare the findings from this attitude-opinion scale with the teachers' direct preferences for objectives (discussed just previously) and with their practices in terms of time allotted to particular areas of activity (discussed in an immediately following chapter). It is also of interest to compare these findings of educational viewpoints and choice of objectives with teachers' preferred teaching and disciplinary techniques, discussed in a following chapter.

There were 32 statements in this "Educational Viewpoints" attitude scale.

The items in the scale were agreed to as follows by senior and by junior kindergarten teachers:

1. It is too early to encourage children to start reading at 4½ - to 5½. Senior kindergarten 37.8 percent; junior kindergarten 23.1 percent.

2. It is important to include a number of activities about children's own cultures and ethnic groups. Senior kindergarten 89.7 percent (4 missing); junior kindergarten 91.7 percent.

3. Classroom visitors, however well-meaning, tend to distract children and disrupt class activities. Senior kindergarten 42.5 percent (3 missing); junior kindergarten 46.2 percent.

4. Children should be encouraged to tell the teacher and the class about incidents that happened outside the class. Senior kindergarten 87.5 percent; junior kindergarten 100 percent.

5. Boys generally have more trouble learning language skills than girls do: Senior kindergarten 26.3 percent; junior kindergarten 21.4 percent.

6. The teacher should praise children often for neatness in appearance and work: Senior kindergarten 90 percent; junior kindergarten 78.6 percent.

7. Children should have assigned seats and places for at least part of a school day: Senior kindergarten 41 percent; junior kindergarten 50 percent.

8. Most of the objectives of junior kindergarten or early school education are too intangible to measure: Senior kindergarten 23.7 percent (5 missing); junior kindergarten 30.8 percent.

9. There is a need for many more male kindergarten and first grade teachers: Senior kindergarten 76.9 percent; junior kindergarten 76.9 percent.

10. Disadvantaged children generally have more trouble learning number skills than middle-class children do: Senior kindergarten 50 percent (9 missing); junior kindergarten 33.3 percent.

11. Young children should be encouraged to work from patterns or models in their beginning art work: Senior kindergarten 9.5 percent; junior kindergarten 0 percent.

12. Children will make most intellectual and personal-social progress if the teacher is from the same ethnic group as the majority of the class: Senior kindergarten 17.9 percent; junior kindergarten 30.8 percent.

13. It is generally not a good educational practice to devote class time to educational television programs such as "Sesame Street": Senior kindergarten 65.8 percent (5 missing); junior kindergarten 69 percent.

14. Children learn best when there is fairly good order and a low noise level in the classroom: Senior kindergarten 94.9 percent; junior kindergarten 64.3 percent.

15. Children should seldom be allowed to leave a task without completing it: Senior kindergarten 90 percent; junior kindergarten 64.3 percent.

16. Children should be encouraged to speak in complete sentences at every possible opportunity: Senior kindergarten 83.3 percent; junior kindergarten 50 percent.

17. Boys are usually more disruptive in class than girls: Senior kindergarten 35 percent; junior kindergarten 28.6 percent.

18. During class, there should be more communication between the children and the teacher than between the children: Senior kindergarten 12.2 percent; junior kindergarten 14.3 percent.

19. It is important for teachers to have schedules and activity plans worked out well in advance for kindergarten and Grade 1 classes: Senior kindergarten 80.5 percent; junior kindergarten 50 percent.

20. The use of games, toys and play equipment and materials should be restricted to free play periods: Senior kindergarten 33.3 percent; junior kindergarten 38.5 percent.

21. Children should be encouraged to ask the teachers' permission before beginning a new activity on their own: Senior kindergarten 14.3 percent; junior kindergarten 14.3 percent.

22. Girls usually have more trouble learning number skills than boys do: Senior kindergarten 2.6 percent; junior kindergarten 7.7 percent.

23. Disadvantaged children generally have more trouble learning language skills than middle class children do: Senior kindergarten 76.3 percent; junior kindergarten 69.2 percent.

24. The home is the source of most of the difficulties children have in school: Senior kindergarten 54.5 percent (10 missing); junior kindergarten 46.2 percent.

25. Traditional children's literature (fairy tales, nursery rhymes, etc.) has a definite place in kindergarten program: Senior kindergarten 100 percent; junior kindergarten 92.9 percent.

26. Each day's activities should be derived almost entirely from children's own interests and spontaneous questions, or incidents that occur in the environment: Senior kindergarten 42.1 percent; junior kindergarten 57.1 percent.

27. Children whose 2nd language is English/French can be taught more effectively in separate classes: Senior kindergarten 12.9 percent (12 missing), junior kindergarten 27.3 percent.

28. One of the teacher's most important responsibilities is to establish classroom rules and procedures and ensure children learn them: Senior kindergarten 61.9 percent; junior kindergarten 42.9 percent.

29. The home is the source of most of the advantages children have in school: Senior kindergarten 72.2 percent (7 missing) junior kindergarten 93.2 percent.

30. There should be some time during each day in school when children are free to choose any activities or materials they wish: Senior kindergarten 100 percent; junior kindergarten 100 percent.

31. Parents should be involved in planning pre-school and kindergarten activities: Senior kindergarten 23.7 percent; junior kindergarten 38.5 percent.

32. Sensitive content such as sex, death, birth, religion and fears should be avoided as much as possible in kindergarten classroom: Senior kindergarten 12.8 percent; junior kindergarten 21.4 percent.

The proportion of agreement ranges from 100 percent or near, to zero, for different items, which is as it should be for a well-constructed scale measuring the full range of attitudes.

The items drawing 50 percent assent (e.g. #3, 7, 10; Senior kindergarten only 16; Junior kindergarten only, 24; 26) either represent a "median" level of attitude balanced between positive and negative, or an about equally balanced commitment to and against the practice, or indifference, or lack of information. Without further information or cross-checking, it is not always possible to interpret this level of opinion.

In general, there appears to be a high level of agreement between senior and junior kindergarten teachers in educational viewpoints. However, there are differences, which reflect a different viewpoint by the junior kindergarten teacher, or different needs/abilities in the children e.g. #16 - children should speak in complete sentences - endorsed by a majority of senior kindergarten teachers but only 50 percent of junior kindergarten. Also Item 28 - one of the teachers most important responsibilities is to establish classroom rules, etc.- endorsed by just over 60 percent senior kindergarten teachers but 43 percent of junior kindergarten teachers, and Item #6 - the teacher should praise children often for neatness, etc. - fully endorsed by senior kindergarten teachers at 90 percent but less by junior kindergarten teachers at 78.6 percent. All these responses suggest that junior kindergarten teachers do not see it as right or feasible to impose certain requirements on junior kindergarten children, possibly because children are perceived as either not being ready for or not requiring these kinds of learning.

The pattern of responses suggest, e.g. items #18, 20, 21, and

30 in particular, that most kindergarten teachers in this sample hold a "developmental", child-centered viewpoint, e.g., #18 "there should be more communication between children than between teacher and children" but with acceptance of some traditional concepts (e.g. the value of traditional children's literature). However, a majority of kindergarten teachers (more junior kindergarten teachers, unexpectedly) would disagree that it is too early to encourage children to start reading at 4½ - 5½; the objectives of junior kindergarten or early school education are not seen as too intangible to define; senior kindergarten teachers also consider it important to have activity plans worked out well in advance, but 50 percent of junior kindergarten teachers obviously do not favour or see relevance in this kind of planning. The "developmental" approach may lead to some indecision or to an even division between teachers who do and do not believe that children should have almost complete freedom of activity e.g. #26 around 50 percent consider that each day's activities should be derived almost entirely from children's interests, etc., the senior kindergarten endorsing this slightly less and the junior kindergarten group slightly more than 50 percent.

Belief in "free" activity is also reflected by the negative answers to the question whether games and play equipment should be restricted to a free play period. However, about a third of teachers agree with this, suggesting that not all operate a completely "free" classroom.

Several of these responses can with advantage be compared with the observations of the research team on the degree of free activity and experience in classroom and teachers' reports on their practices and on use of equipment e.g. limited use of TV, which corresponds to the view expressed here that it is generally not good educational practice to devote class time to educational television programs.

There are some interesting "attitude" items which betray possible preconceptions on the part of teachers. While agreeing that it is important to include activities relating to children's cultures and ethnic groups, they are not prepared to accept what seems a reasonably plausible idea, partly supported by response to this question, that children will make most progress if the teacher is from the same ethnic group as the majority of the class.

It is interesting that there is reluctance to accept a statement for which there is some plausible evidence - that children who have a second language can be taught more effectively in separate classes.

It is noteworthy that only just under a quarter of senior kindergarten teachers and just over a third of junior kindergarten teachers feel that parents should be involved in planning school activities. This is consistent with the parent-school relationship described in earlier chapters, which appears to be defined for the most part in terms of the school's initiative.

This makes an interesting contrast with the acceptance of the statement that the home is the source of most of the advantages children have in school.

It is felt by a substantial minority of kindergarten teachers (more in senior kindergarten than junior kindergarten) that boys are more disruptive than girls; and a minority believe boys have more difficulties in language skills. A majority believe, following plausible evidence, that disadvantaged children have more trouble learning language than do middle class children.

This is felt to be true to a lesser degree for learning number.

One of the most interesting items agreed to by just over three-quarters of kindergarten teachers, is that there is a need for many more male teachers in kindergarten and first grade.

CHAPTER 26 – TEACHING AND DISCIPLINE TECHNIQUES

26.1.0 Teaching Techniques and Approaches

Teachers were asked to complete a checklist of 13 teaching techniques or approaches, indicating whether they used them often, some of the time or not often. They were also asked to complete a checklist of 17 discipline and management techniques which might be used in the classroom.

26.1.1 Teaching Techniques

To simplify and summarize reporting of the results, the following are presented for each item: the percentage checking that they found that technique quite often a useful way of achieving their goals, and a "score" arrived at by multiplying the percentage responding "quite often" by 2 and the percentage responding "some of the time" by 1. This enables a rough comparison to be made between items and between the two groups on the same item.

A large number of senior kindergarten teachers omitted answers on most of the items, the missing values ranging from 5 to 37 out of 43. The adjusted percentages which are reported and used as the basis of scores are therefore at times based on very few cases and to that extent unreliable and possibly biased. It has to be assumed that the missing responses were those of teachers who did NOT endorse that item. The responses for the junior kindergarten teachers contained many fewer missing values, so that their responses are more reliable. The effect of missing responses should be borne in mind in interpreting responses to this check list.

The items are ranked in order of proportion of acceptance by senior kindergarten teachers.

Teachers find it useful as a way of achieving their goals to do the following:

1. To use as wide a variety of materials as possible: Senior kindergarten 94.9 percent (4 missing), score 19.5; junior kindergarten 92.3 percent, score 19.2.
2. To encourage group co-operation in sharing an activity or project for a common purpose: Senior kindergarten 76.3 percent (5 missing) score 17.4; junior kindergarten 69.2 percent, score 16.9.
3. To organize a large (more than 5) number of learning centres/areas Senior kindergarten 73.1 percent (17 missing), score 17.3; junior kindergarten 50 percent, score 11.7.
4. To use a variety of groups at different times for learning purposes: Senior kindergarten 64.7 percent (9 missing), score 16.5; junior kindergarten 10 percent, score 7.
5. To organize individualized activities so that the child is working at his/her own level and time: Senior kindergarten 58.1 percent (12 missing), score 15.8; junior kindergarten 58.3 percent, score 13.3.
6. To develop as many teacher-made materials as possible: Senior kindergarten 51.5 percent (10 missing), score 15.2; junior kindergarten 46.2 percent, score 13.1.
7. To use a well-selected set of programmed learning materials: Senior kindergarten 47.1 percent (26 missing), score 14.7; junior kindergarten 20 percent, score 6.
8. To organize a small number (less than 5) of learning centres at one time: Senior kindergarten 45.8 (19 missing), score 14.6; junior kindergarten 9.1 percent, score 5.5.
9. To use direct instruction as a method of teaching a subject: Senior kindergarten 42.4 percent (10 missing), score 14.2; junior kindergarten 9.1 percent, score 8.2.
10. To direct children's use of learning centres so that every activity

will be covered in a period of time: Senior kindergarten 38.2 percent (9 missing), score 13.8; junior kindergarten 16.7 percent, score 5.8.

11. To arrange for competition between groups of children for the best effort of the group: Senior kindergarten 15.8 percent (24 missing), score 13.6; junior kindergarten 16.7 percent, score 1.7.
12. To encourage children to use individual tables or carrels for individualized work: Senior kindergarten 33.3 percent (37 missing), score 13.3; junior kindergarten 0 responses, score 0.8.
13. To arrange for competition between individual children (e.g. winning a game, being best in an activity, having a prize such as a picture): Senior kindergarten 16.7 percent (37 missing), score 11.7; junior kindergarten 0 responses, score 0.8.

It is evident that the order of priority for senior and junior kindergarten teachers is significantly different on a number of items. The rank order correlation between order of priority for these items for the two groups was only .365. This is in marked contrast to the high correlation between priority of educational goals for the two groups.

However, there is agreement on some items, particularly those endorsed by a high proportion of the group. The responses suggest that teachers attach importance to: using a wide variety of learning materials; encouraging group co-operation as contrasted with individual competition and reward; organizing a large number of learning centres/areas; organizing individualized activities so that the child is learning at his own level and in his own time; and developing as many teacher-made materials as possible.

The senior kindergarten teachers appear to attach more importance to direct instruction, to directing children's use of learning centres to ensure systematic coverage of activities, and some use of selected programmed materials.

Junior kindergarten teachers seem less inclined to favour using a variety of groups at different times; they are more committed to informal, "free" methods, with less direction of children.

26.1.2 The Two Techniques or Approaches Judged Most Useful in Achieving Their Goals

Teachers were asked to select the two techniques or approaches found most useful in achieving their goals.

For the senior kindergarten teachers they were:

(1) To use as wide a variety of materials as possible, 48.5 percent of cases.

(2) To encourage group co-operation in sharing an activity or project, 33.3 percent and;

(3) To organize individualized activities so that the child is working at his/her own level and pace, also 33 percent of cases.

For the junior kindergarten, the preferred techniques were:

(1) To use a wide variety of materials, 75 percent of cases;

(2) To encourage group co-operation, 58.3 percent; followed by the organization of a large (more than 5) number of learning centres, 25 percent.

26.1.3 The Two Techniques Found Least Useful

For senior kindergarten teachers these were:

(1) Arranging for competition between individual children, 67.9 percent of cases;

(2) Arranging for competition between groups, 39.3 percent followed by using programmed materials, 25 percent.

For junior kindergarten teachers, the two techniques found least useful were:

(1) Arranging for competition between individual children, 81.8 percent of cases; and

(2) To direct children's use of learning centres so that every activity will be covered in a period of time, 36.4 percent.

Another least-preferred technique was to arrange for competition between groups of children (27.3 percent of cases).

There is therefore considerable agreement between senior and junior kindergarten teachers that the most useful techniques or approaches for achieving their goals are utilizing as wide a variety of learning materials as possible and encouraging group co-operation on activities and projects. Both agree that the least useful technique is to stimulate competition between individual children, but the junior kindergarten teachers indicate there is predilection for completely "free" activity and unwillingness to use groups as a basis for activity (see following chapter).

The rejection of "competition" is quite clear and significant (in following section). It is consistent with the preference for disciplinary techniques. However, this statement of preferred educational techniques and (by implication) educational objectives should be related to the finding that a significant proportion of teachers claim to make use of an individual token or reward system for correcting poor behaviour, which is a kind of self-competitive situation.

26.2.0 Discipline/Management Techniques

The reporting of responses to this check-list is simpler, since they were classified as sometimes/never.

There was little differentiation between the two groups, or between items on these questions, since there was such a high rate of positive responses to most of them. On 4 items, all teachers from both groups gave a positive answer. These items are:
To manage or change a child's behaviour, it is appropriate to #4 Touch or hold child gently and talk to him/her; #3 For the teacher to move closer to the child/children; #8 Redirect child to another activity; #14 Praise child/children when showing appropriate behaviour.

Other items had high frequencies of response in both groups:

#2 Show disapproval by word or gesture: senior kindergarten 95.2 percent; junior kindergarten, all.

#13 Talk over the situation quietly with the child/children later: senior kindergarten 88.1 percent; junior kindergarten, all.

# 6 Give the child/children a firm command to stop: Senior kindergarten 97.6 percent; junior kindergarten 85.7 percent.

# 9 Redirect the child to another group of children: Senior kindergarten 83.3 percent; junior kindergarten 92.9 percent.

# 7 Tell the child/children immediately what he/she should be doing: Senior kindergarten 85 percent, junior kindergarten 84.6 percent.

#12 Isolate/give time out to child: Senior kindergarten 84.2 percent; junior kindergarten 85.7 percent.

# 1 Ignore the child/children: Senior kindergarten 78.6 percent; junior kindergarten 85.7 percent.

There was a group of items to which there was less assent:

#15 Make child/children complete the task: Senior kindergarten 89.7 percent, junior kindergarten 64.3 percent.

#10 Show the child an example of another child's appropriate behaviour: Senior kindergarten 61 percent; junior kindergarten 57.1 percent.

# 5 Physically restrain the child: Senior kindergarten 50 percent; junior kindergarten 42.9 percent.

#17 Have a token or reward system for correcting poor behaviour: Senior kindergarten 45.9 percent; junior kindergarten 64.3 percent.

There were 2 items to which assent was low:

#11 Point out the child's/group's poor behaviour to the other children: Senior kindergarten 12.2 percent; junior kindergarten 14.3 percent.

#16 Make child/children stay after school or at recess: Senior kindergarten 22 percent; junior kindergarten 0 percent.

The general preference in management of behaviour in the kindergarten class is to touch/hold the child gently and talk; move closer; redirect to another activity; praise children for showing appropriate behaviours.

Disapproval is mainly shown by word or gesture: talking over the situation quietly giving him commands to stop; redirecting the child to another group; telling the child what he should be doing; isolating or giving time out; or ignoring.

As appeared from other evidence from teachers (previous chapters) there is less belief in making the children complete the task on the part of junior kindergarten teachers, or in making the child stay behind. It is interesting that there is use of modelling of another child's behaviour by about 60 percent of kindergarten teachers, but this is not a preferred technique.

Although a token or reward system is not the preferred mode of management, it is used by nearly half the senior kindergarten teachers and, interestingly, by over 60 percent of junior kindergarten teachers.

Management techniques in general aim at being positive-reinforcing, re-directing, isolating/time out or by command to stop; negative techniques are not used or admitted to.

26.3.0 Summary: Teaching Approaches and Discipline Techniques

This analysis of preferred teaching and disciplinary/management techniques produces a consistent and convincing picture of the beliefs and practices of kindergarten teachers. These appear to be consistent with expressed objectives and philosophy.

There is generally close agreement on disciplinary/management techniques but a fair area of disagreement in detail on teaching techniques between senior and junior kindergarten teachers.

CHAPTER 27 – THE ORGANIZATION OF AREAS OF ACTIVITY AND OF GROUP WORK

Teachers were asked to estimate the time devoted to particular areas of activity in their classroom, and to comment on the importance of these activities. They were also asked to comment on where children carried out indoor, physical educational and environmental learning activities.

Teachers were also asked to indicate how they grouped children for these activities, the size and basis of the groups and the degree to which they were teacher-directed.

Teachers had been asked, on another questionnaire, to estimate the degree to which children were involved in various activities, based on observation of these activities; the research team also took a sample of children's activities. It is of interest to compare the present findings with this other information (see previous chapter).

The way in which time is allotted to activities, their importance and modes of grouping and direction are also direct measures of the teachers' working practice in the classroom; it is of interest to compare these findings with priority of educational objectives and assent to educational beliefs bearing on classroom practice.

27.1.0 Organization of Areas of Activity; Time

Time is the most important commodity in the classroom; allocation of time indicates the importance of an activity or the particular needs of that activity for a specific span of time. Teachers were asked to estimate whether they spent a great amount of time, a moderate amount or little on given areas of the curriculum. To simplify reporting, the percentage of responses to "great amount of time" are quoted; a rough score is obtained for each item by multiplying the percentage response for "great amount of time allotted" by 2 and "moderate amount" by 1, by adding and dividing by 10, so that the score runs from 0 to 20.

The items are arranged in order of priority as perceived by the kindergarten teachers.

1. Oral language activities - talking discussing, dramatizing, poetry involving teacher: senior kindergarten 83.7 percent, score 18.4; junior kindergarten 78.6 percent, score 17.2;

2. Creative activities - art crafts, clay, collage: senior kindergarten 54.8 percent, score 15.5; junior kindergarten 85.7 percent, score 17.9;

3. "Pre-reading" activities - teacher reading, children looking at books, visual discrimination (shapes, patterns, colours, etc.): senior kindergarten 48.8 percent, score 14.2; junior kindergarten 35.7 percent, score 13.6;

4. Problem-solving activities (puzzles, games, manipulative materials requiring patterning, classification and sorting activities): senior kindergarten 44.2 percent, score 14; junior kindergarten 64.3 percent, score 16.4;

5. Activities involving number and number concepts (counting, comparing, measuring, finger-plays, number songs): senior kindergarten 30.2 percent, score 12.3; junior kindergarten 7.1 percent, score 0.7;

6. Musical activities - playing instruments, singing, listening: senior kindergarten 33.3 percent, score 12.1; junior kindergarten 42.9 percent, score 13.6;

7. Physical-motor activities - (gym, activities directed by teacher): senior kindergarten 27.9 percent, score 12.1; junior kindergarten 57.1 percent, score 14.3;

8. Activities relating to creative expression in dance, movement, rhythm: senior kindergarten 11.9 percent, score 8.1; junior kindergarten 42.9 percent, score 13.6;

9. Activities involved with environmental studies - animals, natural phenomena, science experiments: senior kindergarten 11.9 percent, score 6.7; junior kindergarten, 21.4 percent, score 9.6;

10. Activities dealing with the social environment - adult vocations, group interactions, social values and behaviours: senior kindergarten 14.3 percent, score 6.4; junior kindergarten 35.7 percent, score 10.7;

11. Activities dealing with the child - health, safety, self-help: senior kindergarten 9.5 percent, score 5.7; junior kindergarten 57.1 percent, score 15.7;

12. "Pre-writing" activities - copying, labelling: senior kindergarten 7.1 percent, score 4.5; junior kindergarten 7.1 percent, score 0.7;

13. Explaining classroom rules/procedures: senior kindergarten 2.4 percent, score 2.2; junior kindergarten 35.7 percent, score 10.

There is generally close agreement between senior and junior kindergarten teachers on the percentage of time allotted to activities and the "score" which denotes the importance attached to that activity. The rank order correlation between the two groups was .874, which is high and significant.

However, the junior kindergarten teachers appear to allot more time in general to all activities.

As expected, there is high priority for language activities and "creative" activities. This confirms the priorities allotted by teachers in their judgments on educational objectives, and corresponds to the commitment to activity areas observed by teachers and by the visiting research team.

However, it is interesting to find that "pre-reading" activities have such a high priority; in listing educational objectives, reading-related activities had a moderate priority. It may be recalled, however, that both senior and junior kindergarten teachers considered, in their response to questions on "Educational Viewpoints", that reading was appropriate to the child of 4½ - 5½ years of age.

The priority allotted to "reading" activities in actual practice is therefore higher than in verbal judgments on objectives.

It is also of interest that "problem-solving" activities have a quite high priority in time, particularly for the junior kindergarten teachers, though in judgments on priority of educational objectives, kindergarten teachers allotted only a moderate priority to "problem solving". It may be recalled that by far the most important and complex educational objective for kindergarten teachers was the development of cognitive-intellectual abilities (attention, curiosity, exploration, experiments, etc.); it may be that allocation of an important amount of time to problem solving reflects the attempt to realize this important educational objective.

Activities involving number also appear to have a higher priority in practice than judgments based on statements of educational objectives would suggest.

By contrast, physical motor activities such as gym and physical activities directed by the teacher appear to have a lower priority of time allocation than would appear from direct observations by teachers and by the research team of the time spent by children in the area of physical-motor areas. They related to their spontaneous and unguided physical activity, not the kind of guided and patterned physical activity implied here.

As would be expected from previous discussions of the commitment to different aspects of the program, activities dealing with child-safety, health and self-help have a low allotment of time in the senior kindergarten group. This may reflect the fact that, in general, children were rated as high in developmental skills such as self help and social skills by their teacher (see previous chapter on tests and assessments of children) and that older children, in particular, are perceived as independent and not needing direct experience or instruction in safety and health.

It is of interest that although "pre-reading" activities have a high priority in terms of time, "pre-writing" activities have the lowest in both junior and senior kindergarten classes; "pre-writing" may be perceived as a set of skills and abilities which are not particularly appropriate to the developmental levels and needs of young children, or as unduly formal and traditional academic activities. However, one must wonder why "reading" and "writing", which are so intricately involved, and which can often contribute to one another in the early stages of acquisition of reading - as in the most effective "language experience" approaches - are perceived as being so separate by kindergarten teachers.

Activities involving the environment have rather low priority. It may be recalled that parents, in their listing of educational objectives, allotted low priority to environmental studies as compared with moral teaching; the 3 R's and self-help/social skills. There would appear to be a fairly sharp discrepancy, at least on the surface, between stated parental priorities and those of the kindergarten teacher.

It will also be recalled that observation of children indicated that there was low involvement in activities relating to science/environmental studies centres or areas, that provision for science/nature/environmental studies appears to be restricted,according to teachers' reports on materials and equipment, and that direct sample observations by the research team suggested that there was rather poor or inadequate provision of centres relating to science and the environment.

Despite the agreement between senior and junior kindergarten teachers, there are differences in practice.

Junior kindergarten classes seem to have a higher time allotment for problem solving activities and environmental studies, as one would hope in classes dealing with active young children who have an interest in their environment and whose natural curiosity and need to experiment should be encouraged.

There is a greater allotment of time to physical-motor activities by junior kindergarten teachers, again expected in view of the need for movement in young children.

Senior kindergarten teachers allot very low priority to "housekeeping" activities such as explaining classroom rules and procedures, whereas junior kindergarten teachers allot some importance to this. Clearly, teachers of senior kindergarten children expect a reasonably high level of competent and independent classroom behaviour which does not require constant checking and guidance, whereas junior kindergarten children are young and immature enough to need more attention to explicit explanation and practice of classroom routines.

This difference in procedures is consistent with the pattern of difference between senior and junior kindergarten classes identified in several sections of this study, and probably relates, as noted, to the different needs and developmental levels of the two age groups as well as to the slightly varying"philosophies" (educational objectives, techniques, organization) of the senior and junior kindergarten teachers. (See the chapters of educational objectives, educational viewpoints and in particular allotment of time and grouping for differing learning activities).

It is noteworthy that senior kindergarten teachers allot low priority to creative activities in dance, movement and rhythm i.e. those expressive activities related to movement, whereas junior kindergarten teachers allot significantly more time to this area. It is disturbing, but not unexpected in view of the fairly conventional pattern of kindergarten program which emerges from this study, that so little time is allotted to an important area of experience and communication.

In view of the stress placed by parents, in their views on educational objective, on "moral education", and the high priority placed on developing personal-social abilities by all kindergarten teachers, it is interesting to see that activities dealing with the environment, group interactions, social values and behaviours - have a low priority in time.

The least important activities for junior kindergarten teachers were: (1) Pre-writing 84.6 percent; (2) Activities relating to the social environment 38.5 percent; Environmental studies 38.5 percent. These were followed by: Activities dealing with the child-health, safety, self help 23.1 percent, and Explaining classroom rules and procedures 23.1 percent. There appears to be a higher agreement on what the senior kindergarten and junior kindergarten teachers consider the least important activities, especially Environmental studies and Pre-writing.

27.2.0 Location of Various Learning Activities

Children have their "teacher-directed" physical education as follows:

The senior kindergarten teachers report that 9.5 percent have this activity in the room; 81 percent outside the classroom in a gym or outdoor playground and 9.5 percent about half in the classroom and half outside it. The junior kindergarten teachers report that 7.7 percent have this activity in the classroom; 69 percent outside the classroom in a gym or outdoor playground; and 23.1 percent half in the classroom and half outside it.

The responses to this question confirm previous evidence, from the teachers' questionnaire, that junior kindergarten classes probably use outside facilities such as gym less than do senior kindergarten classes, or have them less available.

Since active, experiental learning requires a considerable amount of space and opportunity to interact with a variety of materials and persons, it seems doubtful whether the largest kindergarten classroom could conveniently contain all the "centres" and areas required.

Experience of 'open' and experience/activity based education indicates that children may need to work outside the classroom, in their own outdoor area (e.g. for physical activities, nature and environmental studies, etc.) or use the outside spaces and hallways (e.g. for activity areas devoted to science, measuring, etc.)

The next question asked where do children carry out most of their indoor learning activities?

The vast majority of senior kindergarten classes do so in their own classroom - 92.9 percent. The majority of junior kindergarten classes carry out most of their indoor learning in their own classroom - 71.4 percent, but there is a significant minority which makes use not only of the classroom but of other parts of the school.

Children are taken on trips to the immediate environment as follows:

Senior kindergarten: at least once a week 33.3 percent; at least once a month 61.9 percent; and on special occasions 4.8 percent. Junior kindergarten: at least once a week 28.6 percent; at least once a month 64.3 percent; and on special occasions 7.1 percent.

This use of the immediate environment for learning experiences is essentially similar between senior and junior kindergarten classes.

Longer trips involving buses and being away for the whole session are taken as follows: Senior kindergarten: once/twice a month 2.4 percent; once or twice a term 69 percent; and not very often 31 percent.

Junior kindergarten: once or twice a month 7.1 percent; once or twice a term 50 percent; and not very often 42.9 percent. It seems that there is a tendency for the junior kindergarten classes to have fewer trips involving buses and being away for the whole session. This restriction on long trips is expected, in view of the difficulties of organizing long trips for young children, and the sometimes doubtful benefits in educational experience of a long day away.

The organization of kindergarten on a half day basis would also make the organization of a long day trip rather more difficult.

To make such trips practicable, presumably, they are always supervised by both teacher and parents.

CHAPTER 28 – THE ORGANIZATION OF GROUP ACTIVITIES

28.1.0 Grouping for Learning Activities

Teachers were asked whether they explicitly grouped children for learning activities.

Among senior kindergarten teachers, 60 percent grouped their children; among junior kindergarten children, only 14.3 percent did so.

It seems difficult to understand how a teacher can organize a classroom containing a variety of 5 or more activity areas or centres without at least implicitly organizing children so that they can make the most effective use of a variety of learning experiences, and do so in a reasonably coherent and organized manner which will meet all their needs. This would not conflict with a high degree of freedom of activity on the part of the children. However, it may be that the junior kindergarten teachers interpret this question to mean that children are explicitly put into groups and guided or instructed on their choice of activity. The answer may simply mean what it seems to mean - that junior kindergarten children are permitted to make their own choices without reference to any group.

It is of interest to compare kindergarten teachers' views on the organization of groups with evidence on the ways in which teachers in Grade 1 and Grade 2 organized groups within their classes for differing aspects of the program, as described in an experimental study of a reading program in elementary schools in South Peel (see Morgan, 1979).

In the following section, it should be borne in mind that the responses relating to grouping are based on the 60 percent of senior kindergarten teachers who practise grouping, and only a very small minority (2 schools) of junior kindergarten classes. There is no purpose therefore, in analyzing the responses for the junior kindergarten classes.

28.1.1 The Organization of Group Activities

Teachers were asked to fill out a chart, detailing for 13 activities: whether they were teacher-directed, what was the basis for the group (ability, children's choice or teachers' choice) and the usual group size (0 - 3, 4 - 8 and over 10).

The question on teacher direction was obviously aimed at finding whether some activities are seen as needing more direct instruction than others, and to check on the nature of "free" and "organized" activity by children as described in previous observations by teachers and research team (see previous chapters).

The question on the basis for group formation should also throw light on how far activities are "free" and "organized", or directed by children's interests/themes/activity preferences as contrasted with teacher's guidance. It may be recalled that questions bearing on organization were included in the questionnaire of "Educational Views" discussed previously, and that teachers also directly expressed views on their preferred Educational techniques and approaches, as discussed in a preceding chapter.

It seems most useful to discuss and analyze each item (activity) separately in terms of teacher direction, group formation and group size, rather than splitting up these factors. Activities are discussed only for senior kindergarten classrooms, since responses for junior kindergarten teachers were so limited and so biased.

28.1.2 Senior kindergarten responses

1. Receptive Language Activities

76.2 percent were teacher-directed (22 missing). 12.5 percent of the groups were based on ability; 31.3 percent on children's choice, and 56.3 percent on teacher's choice. (27 missing)

The usual group size was: 0 - 3 children, 11.1 percent; 4 - 8 children 44.4 percent and over 10 children 56.3 percent.

2. Expressive language

65 percent were teacher-directed (23 missing) 12.5 percent of groups were based on ability; 43.8 percent on children's choice and 43.8 percent on teacher's choice (27 missing).

The usual group size was: 0 - 3 children 17.6 percent; 4 - 8 children 29.4 percent, and over 10 children 52.4 percent.

3. Pre-reading Skills

85 percent were teacher-directed (23 missing)

38.9 percent were based on ability; 27.8 percent on children's choice; and 33.3 percent on teacher's choice. (25 missing)

The usual group size was: 0 - 3 children 5.6 percent; 4 - 8 children 83.3 percent; and over 10 children 11.1 percent.

4. Number/Math Concepts

86.4 percent were teacher-directed (21 missing)

45 percent were based on ability; 35 percent on children's choice; and 20 percent on teacher's choice.

The usual group size was: 0 - 3 children 10.5 percent; 4 - 8 children 78.9 percent; and over 10 children 10.5 percent.

5. Environmental Studies

50 percent were teacher-directed (23 missing)

66.7 percent were based on children's choice and 33.3 percent on teacher's choice; none on ability.

The usual group size was: 0 - 3 children 35.3 percent; 4 - 8 children 47.1 percent; and over 10 children 17.6 percent.

6. Creative Art

45 percent was teacher-directed (23 missing)

78.9 percent was based on children's choice and 21.1 percent on teacher's choice. None was on ability.

The usual group size was: 0 - 3 children 11.1 percent; 4 - 8 children 77.8 percent; and over 10 children 11.1 percent.

7. Role Playing

Only 8.7 percent was teacher-directed (20 missing)

90 percent were children's choice and 10 percent teacher's choice; None was based on ability. The usual group size was: 0 - 3 children 31.6 percent and 4 - 8 children 68.4 percent, with no group larger than 8 children.

8. Dramatic Play (Puppets, plays, etc.)

33.3 percent was teacher-directed (22 missing)

89.5 percent were children's choice and 10.5 percent teacher's choice (24 missing). None was based on ability.

The usual group size was: 0 - 3 children 58.8 percent and 4 - 8 children 41.2 percent; there was no group larger than 8.

28.2.0 Discussion: -

28.2.1 Teacher-direction

An unexpectedly high proportion of activities were teacher-directed. Further examination suggests why this may be so. Receptive language activities clearly must involve interaction between teacher and child in large measure; this fact is also reflected in the high proportion of group formation on the basis of the teacher's choice.

Proportion of teacher direction for Expressive Language is slightly lower,as is the degree of teacher's choice in group formation; clearly, expressive language activities can more readily be part of a child's conversation/discussion with others, not just the teacher.

It was pointed out, in the discussion of the teachers' observations of the frequency with which children participated in particular activity areas (in a previous chapter), that it was likely that children would need to interact with or be guided by the teacher, not simply work/play with their peers. Even the low frequency of requesting teacher's help observed for those activities might suggest that the child was already receiving enough guidance or direction.

The amount of teacher direction for "pre-reading" would be expected, since this involves either careful arrangement of the learning situation and materials or direct instruction/guidance.

However, the fact that such a high proportion of groups for number/math are teacher directed suggests that this activity either involves a great deal of direct teacher activity in giving instruction or suggestion in dealing with counting, using math games, measuring, etc. or that the teacher has intervened considerably in setting up the learning experience. The facts suggest that, for this particular set of kindergarten classes (the 60 percent using group work), children are not necessarily enabled to carry out exploration or experiment in math/number concepts on their own. There was some evidence, from the findings on the equipment provided for different activity areas (see previous discussion) that materials for measuring and other practical work (which might be undertaken independently by the child) were found rather less frequently than more traditional number materials and games.

By contrast, there was less teacher direction in activities in which the child should have an opportunity to experiment on his own - in Environmental Studies and Creative Activities (painting, etc) Even here, however, there was a significant amount of teacher direction, possibly in preparing materials, possibly in guiding and questioning the child to the most effective use of the activity.

As expected, Role-playing (dressing up, etc.) was mainly child-directed, involving as it does the free development of fantasy and symbolic play. Ironically, the richest and most comprehensive direction of such play, after the initial stages would probably come from more teacher suggestion and guidance than is usually given.

28.2.2 The Basis for Formation of Groups

The basis for formation of groups has been touched on already. To some extent, it must relate to whether the teacher actively directs or not.

Two activity groups were significantly based on ability: pre-reading and number/math concepts. This relates to the fact that these activities are both almost completely teacher-directed. The implications of this are discussed above. Even within these groups, however, between a quarter and a third are based on children's choice rather than ability for teacher's choice.

Language activities clearly involve considerable teacher-child interaction so it is not surprising to find that just over or under 50 percent of groups are based on teacher's choice.

The "free activity" groups: role-playing, environmental studies and creative activities have a high proportion of children's choice and none is based on ability.

There is an interesting compromise in dramatic play, where about a third of groups are teacher directed (in use of puppets, play-making, etc.) but the groups are almost entirely based on children's choice.

28.2.3 The Size of Learning Group

The sizes of learning groups were carefully defined and selected. There is evidence (e.g. from Fowler and others) that a group of up to three children is a group in which children can operate as individuals and receive a high degree of individual attention i.e guidance, conversation or "tutoring". Beyond a group of three, the efficacy of individual interaction between teacher and child falls off rapidly, and the child finds himself/herself in a "group" situation.

It was decided, from study of the literature, that a group of 4 or more might well be found working at an activity centre, and that a group ranging from 4 to 6 or 8 in size would be likely to work at a centre or form a group around a teacher associated with a certain activity. The teacher might simply be near and observe, or make comments and ask questions, or help to re-organize the materials, or intervene more actively. Thus a group of 4 to 8 is defined as a "small group".

Beyond eight (a third of the normal kindergarten class) one is likely to get into a "large group", or effectively a "class" situation.

Analyzing the results in the light of these categories, it would seem that language learning is almost equally divided between small group and class teaching. Pre-reading and math/number skills are taught, demonstrated or discussed in small groups.

Environmental studies/science, role playing and dramatic play are activities conducted typically either in intimate individual groups (0 - 3) or in small groups of 4 upwards.

Creative art is typically done, not in an intimate/individual group but in groups of 4 or more; this may well be because the provision and organization of the materials (easels, etc.) encourage this.

It is of interest to see, reflected in teachers' judgments on the degree to which they direct, the size of group and the basis on which the group is formed, the recognizable pattern of the kindergarten classroom.

CHAPTER 29 – TEACHERS' EXPECTATIONS

29.1.0 Definition of 'Expectations'

These 'expectations' covered the following areas: self-help (e.g. child can put on own shoes); eye-hand co-ordination (e.g. can catch a large ball); pre-reading abilities (e.g. can identify own first name in print); pre-writing activities (e.g. can copy or trace letters); receptive language; expressive language; number/math concepts and abilities; general knowledge or cognitive development (e.g. can name 4 colours); and personal-social (e.g. can select own materials for play activity).

These expectations were selected to cover the range of activities which are deemed most important in the kindergarten program.

A large proportion of items refer to developmental abilities/skills i.e. abilities which are present in children at appropriate age-levels because of previous growth and environmental influences, and which are not usually the subject of direct instruction in school.

Other abilities are "educational" i.e. it is likely that they would be the subject of organized learning or direct instruction. As pointed out later, "expectations" often show different characteristics and levels of performance if they are "educational" rather than "developmental".

Teachers were asked to rate the 103 items covering the areas described above.

They were asked to estimate for each item their expectations for (1) the beginning of the school year, and (2) the end of the school year.

They were further asked to estimate their expectations of success/performance on each item in terms of what would be expected of the bottom, middle and the top thirds of the class based on general ability and developmental level

The teachers were asked to put a check for each item on the third (upper, middle or bottom) in which they believed the majority of children would be found i.e. the most representative ability grouping for that item of performance.

This section of the inquiry was therefore essentially similar to an "attitude" or belief survey i.e. the teacher indicated her level of belief and expectation for a particular item of performance.

The range of differences (or variation) for each item is therefore quite directly related to the range of beliefs or expectations among teachers.

The variation is directly between teachers (i.e. some teachers considered the performance to be typical of the bottom third, others to be typical of middle or upper third of ability) and the statistics are the number or percentage of teachers, not the number of children or items.

Expectations for the senior kindergarten children are based on 43 teachers and, for the junior kindergarten children, on 14 teachers. It is evident that estimates of expectations for senior kindergarten teachers are likely to be more stable and reliable simply because of the larger sample of teachers on which those estimates are based.

29.2.0 The Scoring of Expectations

A considerable amount of information was gathered on each item. First, it could relate to senior or junior kindergarten age-group. Secondly, it would be for beginning or end of school year. Within each item, there were the proportion of responses (expectations) for each third of ability grouping (bottom, middle and top). These were the percentage of teacher responses for each ability group; in addition there were the cumulative proportions for bottom,middle and top thirds which indicated the percentage of teachers' responses (expectations) for the bottom third alone, the bottom and middle third together and total (100 percent). Examination of the cumulative proportions shows clearly where expectations are mainly located for each item in terms of thirds of ability grouping.

In the rating procedure, the lowest third was given the number 1, the middle third 2 and the top third 3. These "numbers" were taken as crude measures of grouping, and the mean, standard deviation and median were calculated i.e. a given number of the total of responses chose category 1, a given number chose category 2 and a given number chose category 3.

The nearer the mean or median for an item is to 1.0, the more likely that the performance represented by that item is perceived as appropriate to the lowest third of ability for the age group i.e. the expectation is that the lowest third (and obviously therefore all children superior in ability) can cope with that task or skill.

The nearer the mean or median is to 2, the more likely that the expectation for that task is that it is appropriate to the middle group. Mean or median scores above 2 and near 3 indicate that the expectation is that the task is appropriate to the upper third in ability.

It should also be noted that, if the mean/median is 1, then approximately 100 percent of teachers locate that task in the bottom third of ability for the age group. If the mean or median score is 2, this indicates that teachers believe that 75 percent of all children can cope with that item. If the mean or median score for the item is 2.5, this indicates that teachers believe that 50 percent of all children in the age group can cope with the item. If the mean/median score reaches 3, this indicates that teachers believe that 25 percent or less of children can cope with that item, and it is characteristic of group 3, or the upper third in ability.

A shift of about 30 percent in the cumulative proportion of responses for an item (in comparing expectations between beginning and end of year, or between age groups) indicates a shift of about half a category(1lower, 2 middle, 3 top ability group) in expectation when the cumulative proportion is above 75 percent. The same shift of 30 percent can mean a shift of up to a whole category (from one level of ability to another) when the cumulative proportion for the item lies below 75 percent.

These observations should be useful in helping the reader interpret a somewhat complex set of data.

29.3.0 Reporting and Analysis of Expectations

To simplify reporting, all 103 items are listed in an appendix to this chapter. They are arranged in order of "facility" of expectation i.e. they begin with items on which teachers' responses indicate that 90 percent or more of children of that age level should succeed and go on down to those items where 30 percent or fewer are expected to succeed. The items are therefore not grouped according to areas of development or program e.g. self-help, pre-reading, etc. but mixed, simply according to "facility" of expectation as described above. However, each item has a key to indicate to which area of development or program it belongs.

The listing in order of "facility" of expectation is based on the teachers' responses for the beginning of the year. The table enables a direct comparison to be made, for each age group, between the level of expectation for a given item at the beginning of the school year and at the end. Comparisons can also be made between senior and kindergarten age groups for beginning and for end of school year.

To simplify reporting, the statistics recorded for each item are: (1) the percentage of teachers' responses for the middle ability third and (2) the cumulative percentage of these responses for the lower and middle thirds. This latter figure is identified as the "expectation". This gives a useful picture i.e. an estimate of the proportion of children for whom teachers believe the task or performance falls within the middle third of ability; a high proportion here would indicate that the expectation is that the task/performance is typical or appropriate for the "average" child of that age group. The cumulative proportion for the lower and middle third gives another perspective on the same information e.g. if 50 percent of responses occur in the lower and middle thirds, that is an item of median difficulty i.e. loosely speaking, would be expected of the "average" child; if 75 percent of responses occur for the lower and middle thirds (i.e. 66 percent of children) this item is an "easy one", or would be passed by a high proportion of all children.

Conversely, if the cumulative proportion for lower and middle thirds is low, say 30 percent, this indicates that a minority of children of that age group is expected to pass that item, and it is "difficult" for the average child.

In addition to these percentages, the difference in percentage between the cumulative proportions for an item for beginning of school year and for end of school year was calculated. These differences are often dramatic. The reader is reminded that changes of 30 percent in expectation (cumulative proportion) indicate that expectations have shifted by from one half to a full category in terms of thirds of ability level.

In addition, the mean score for each item for beginning and end of school year is given, to guide the reader on the category in which the expectation for that item belongs i.e lower (1) middle (2) or upper third (3) of ability for class

29.3.1 Difficult and possibly "Uncertain" Items for the Junior Kindergarten and for the Senior Kindergarten.

There are several items which have a high level of "omitted" responses. These are usually the more difficult items.

A high proportion of omissions generally means that teachers did not expect most children to be capable of that task, not that teachers had no opinion.

On most of the "difficult" items a minority of teachers judged that a proportion of the top third of children could be expected to be successful. However, on some items, a significant to high proportion of teachers expected even the children in the top third to be unsuccessful on those items.

It is evident that the former items are ones where teachers were uncertain of their expectations or may have considered the task or performance in general inappropriate to kindergarten children (with the possible exception of a proportion of the most advanced).

An asterisk by an item indicates that it is of the kind discussed here i.e. there is a high level of omitted responses and/or only a proportion of children in the top third of ability are expected to be capable of succeeding on the item.

In scoring and recording expectations for such items, it should be noted that there is no cumulative proportion for bottom (1) and middle (2), and this can make comparisons difficult.

In reporting and analyzing expectations, therefore, the proportion of responses occurring in the upper third is reported instead, but this figure is placed in brackets. Since this proportion in the top third is calculated on the total number of responses, including omissions (not as a proportion of the children in the top third alone), it can be taken as a cumulative proportion for the whole group. The bracketed figures are therefore also taken as cumulative proportions (expectations for all children; and included as such in calculating averages) for all items, etc.

Since the means are based on all responses, they also give a stable and useful means of comparing items, in terms of level of expectations. It should be recalled that a level near 1 indicates an "easy" item for all children or one for which expectation level is high, whereas a higher score (2 to 3) indicates a more difficult item, or one for which expectation level for all children is lower. Normally, therefore, "scores" drop significantly from beginning to end of year.

Apart from this total list of expectations a sample of one item in four was selected to represent the range in the total list, and these items are dealt with in detail in the following discussion.

Summary percentages and mean scores are also discussed for items grouped under separate headings for different areas of performance: self-help, eye-hand co-ordination, etc.

29.4.0 Discussion: all items

For both senior and junior kindergarten groups, there is the anticipated wide variation in expectations (and therefore, presumed performance) at the beginning of the school year.

For the senior kindergarten teachers, the range is from items on which 97.6 percent of the teachers expect all children to be successful to those items on which only 11.3 percent of teachers expect success. The mean expectation (proportion of success expected) for all items is 47.25 percent and the mean "score" is 2.41.

The findings for the junior kindergarten teachers are: a range of expectation from 100 percent to 21.4 percent, with a mean proportion of 38.25 for all items. The mean "score" is 2.64.

What is striking is the marked change of expectation on the vast majority of items, for both junior and senior kindergarten, from the beginning to the end of the school year.

By the end of the school year, the expectation is at least 90 percent on 34 items, for the junior kindergarten age group; similarly the expectation is at least 90 percent for 63 items for the senior kindergarten group. This change is also indicated by the mean expectation at the end of the school year, which is 72.37 percent for junior kindergarten (mean "score" 1.93) and 83.54 for senior kindergarten (mean "score" 1.6)

The change in expectation level is considerable, and almost identical for both age groups: 34.1 percent for junior kindergarten and 36.3 percent for senior kindergarten. The change in mean score is similar, .71 for junior kindergarten and .78 for senior kindergarten i.e. progress at the level of expectation of approximately three-quarters of an ability category.

A majority of expectations which were well below 90 percent at the beginning of the school year have risen to 90 percent or over by the end of the school year.

29.4.1 Accuracy and Dependability of Expectation for Junior Kindergarten

What is striking is that teachers of junior kindergarten children have a high level of expectations for success on several tasks at the end of the school year. Yet teachers of senior kindergarten children do not have such high expectations for their children on the same tasks, for the beginning of the year.

Since the two age groups are separated by a year of growth and experience/instruction, this essentially means that, at the beginning of the school year, the senior kindergarten children are expected to be near the level of development or performance which would be expected of the junior kindergarten group (a year behind them) at the end of the year. Taken literally, high level of expectations of their teachers for junior kindergarten children at the end of the school year means that they should in theory begin their next school year (as senior kindergarten children) at very high levels of performance on many developmental as well as education items and would be significantly ahead of their senior kindergarten counterparts (or themselves) when they become senior kindergarten children and are rated by their senior kindergarten teachers.

What this must mean is that (1) the junior kindergarten teachers over-estimate their children, or (2) the senior kindergarten teachers underestimate their children or (3) the junior kindergarten must accelerate considerably in performance and overtake their senior kindergarten peers (in effect, themselves) during the course of a year. However, the last conclusion is self-contradictory.

First, many of the ratings of expectation are on developmental items which are closely tied to age and general length of experience rather than to specific learning; a junior kindergarten child is expected to cope with tasks such as catching a ball, drawing a human figure, etc., at a less mature level than the senior kindergarten child who is a year older.

Secondly the junior kindergarten children of one year are (in three of the sample areas studied) also the senior kindergarten children of the following year; yet, according to junior kindergarten teachers, their children are ahead, at the end of the junior school year, of where they are expected to be by senior kindergarten teachers at the beginning of the next year, 3 months later.

This finding raises questions about the accuracy and dependability of expectations of both groups, but more particularly of those of the junior kindergarten teachers. These latter teachers constitute a much smaller and potentially biased sample, so statistically their responses should carry less weight.

This is in spite of the fact that some of the junior kindergarten groups were sampled from one area where there were special junior kindergarten classes for disadvantaged children and would therefore be expected to have lower levels of performance, not higher.

29.4.2 Comparisons of the Program/Developmental Areas

Comparisons for the various areas of the program are listed in the appendix. Discussion follows:-

Analysis of the one in Four Sample of Items

The list of expectations (206 items) for senior kindergarten was arranged in order of difficulty or level of expectation (i.e. cumulative proportion of teachers checking the item), for the "beginning of the year". A sample of one item in four was randomly drawn by taking each fourth item on the list.

The cumulative proportion (up to mid third) for each item is given, for senior kindergarten (first line) and junior kindergarten (second line), and for beginning and end of year. Following is the key to the area to which each item belongs:-

S.H. Self help skills; G.M. Gross motor skills; E.H. Eye-hand co-ordination/fine motor skills; P.R. pre-reading abilities; P.W. pre-writing abilities; R.L. receptive language; E.L. expressive language; N Number/math concepts and skills; G.C. general knowledge and cognitive abilities; S.P. social-personal skills.

	Beginning of year	End
S.H. Can go to bathroom at appropriate times.	97.6	100
	84.6	92.3

		Beginning of year	End
E.H.	- Can use scissors	92.3	92.5
		46.2	92.3
G.C.	- Can match 4 colours	85	100
		41.7	100
N	- Concept of 3	84.2	90
		66.7	100
S.P.	- Can select own materials for play activity	81.6	100
		84.6	100
R.L.	- Can pick out "biggest/smallest"	72.5	97.5
		50	92.3
G.M.	- Can run 10 foot line, turn and run back without stopping	72.2	92.1
		54.5	83.3
S.P.	- Can co-operate with 2 other children	69.2	100
		50	100
S.P.	- Can sustain interest in self-chosen activity over 10 minutes	65.8	100
		40	92.3
G.M.	- Can catch bounced ball	55.9	92.5
		33.3	83.3
P.W.	- Can copy/trace letters	55.6	95.1
		25	60
E.H.	- Can colour within lines	51.3	97.6
		*(71.4)	100
E.L.	- Can tell a familiar story in reasonably correct language	45.5	100
		10	69.2
S.P.	- Can wait for use of preferred toy 10 minutes	38.8	91.7
		14.3	77.8
R.L.	- Can follow 3 directions in sequence	* 34.3	95
		(50)	81.8
P.R.	- Can match familiar pictures and words	30.8	71.7
		40	87.8
P.R.	- Can pick out printed word when given spoken version	*(25.6)	51.9
		*(28.6)	60
P.R.	- Can give rhymes for familiar word	24.1	94.9
		25	44.4
G.C.	- Can distinguish RIGHT/LEFT on own hands	20.8	85
		28.6	50

	Beginning of year	End
P.W. - Can approximate writing patterns	19.0	83.3
	(28.6)	50
E.L. - Can use correct irregular plurals	15.4	62.9
	(35.7)	66.7
N - Can tell time to hour/half hour	*(11.6)	48.0
	*(7.1)	*(21.4)
P.W. - Can write a variety of simple sentences	*(9.1)	40.6
	*(7.1)	* (7.1)
N - Can give combinations within 5 (e.g. 3 and 2)	*(9.1)	39.3
	*(7.1)	(21.4)
G.C. - Knows days of week	7.4	94.6
	(14.3)	25
Grand mean total Senior Kindergarten	47.29	83.72
Junior Kindergarten	*37.78	69.16

It is obvious that levels of expectation vary considerably for the beginning of the year for senior kindergarten, but most items reach high levels for the end of year estimates. Some items begin at a high level of expectation, so that little change can be expected in performance; however, a large number of items show very significant change in levels of expectation as between beginning and end of the senior kindergarten year. There is a very significant mean change in expectation of 36.4 percent i.e. about three quarters of a category or more.

Expectations for junior kindergarten start at a lower level, but increase just as much as do senior kindergarten estimates for the end of the year expectations - an increase of 31.4 percent. Nine items increase to over 90 percent expectation for the end of the year, as compared with 17 items for senior kindergarten.

The initially "difficult" items i.e. those with expectations of 50 percent and below for the beginning of the year, which show dramatic increases in expectation for the end of the year appear to be the "educational" items. These are the items most likely to be influenced by school experience and by teaching.

The items relating to pre-reading and pre-writing (and to a lesser extent, number-math concepts and skills) are those which are judged to be most difficult, i.e. have the lowest levels of expectation at the beginning of the school year, especially for the junior kindergarten group. However, judging by the expectations for the end of the school year, senior kindergarten teachers expect their children to make marked progress in these areas.

Considerable progress is also expected to occur over a year in the social-personal skills related to learning in the classroom, e.g. ability to sustain interest in self-chosen activities, waiting for the use of a preferred toy and selecting one's material for a play activity.

Despite the difference of a year in developmental level and experience, the expectations for some items suggest that junior kindergarten teachers in effect expect their children to be at about the same level as senior kindergarten children at the end of the school year. In one or two instances, there are higher expectations for junior than for senior kindergarten children.

As pointed out elsewhere, some expectations for junior kindergarten children for the end of the school year are much higher than expectations for senior kindergarten children on those items for the beginning of the school year. Expectations for junior kindergarten children may be too high, or expectations for senior kindergarten children may be too low.

It would seem likely that the most reliable and valid expectations are those for the beginning of the school year, i.e., the time at which teachers were actually observing either junior or senior kindergarten children within three months of their entry to school, and could check their estimates from first-hand evidence. Expectations of the end of the year are likely to be subject to much more guesswork and memory; such expectations would best be gathered at the end of the school year, when teachers would once more be observing children at a stage of development directly related to the estimates of expectation. One gains the impression that teachers' expectations and "calibration" of their children's levels of development and performance are fairly immediate and short-term, possibly extending over a period of six months at most.

The estimates given by the junior kindergarten teachers may also be more variable and less valid, possibly because of the age and variability of the children themselves and possibly because there is as yet a less clear definition of expectations for 4 year olds entering a school experience for the first time.

These findings, if confirmed, have important implications for the training of teachers, for methods of assessing and recording developmental levels and progress, and for communication and continuity between the junior kindergarten and senior kindergarten stages. The reader is referred back to the findings on methods of transferring records and ensuring continuity between junior and senior kindergarten, or senior kindergarten and Grade 1 levels in a previous chapter

29.5.0 Analysis of Expectations in Different Areas of the Program

29.5.1 Self Help Skills

Self help skills appear to be well mastered by both junior and senior kindergarten children. It may be recalled that teachers gave high ratings to children in the sample for competence in this area. (See previous chapter). There is, therefore, a high level of expectation for these skills, the highest for any area of development.

Junior kindergarten children have a mean level of expectation of 70.83 percent (mean score 2.03) for the beginning of the school year, and a mean level of 94.87 percent (mean score 1.25) for the end of the school year. The anticipated change over the year is 24 percent or .78 in mean score, i.e., a change of just over three quarters of an ability grouping based on lower, middle and top thirds of ability.

Senior kindergarten children are expected to begin at a significantly higher level than do junior kindergarten children - 88.15 percent(mean score 1.68); because their self-help skills are expected to be at such a high beginning level, there is much less opportunity for anticipated progress by the end of the school year, to 98.9 percent (mean score 1.38), a change of only 10.65 percentage points.

29.5.2 Gross-Motor/Physical Education Skills

Junior kindergarten children are perceived as being significantly less advanced or competent than senior kindergarten children in gross motor movement skills at the beginning of a school year (46.01 percent junior kindergarten, 64.58 senior kindergarten). There is a significant expectation of growth in gross motor skills from beginning to end of school year, and more so for junior kindergarten than for senior kindergarten children. Junior kindergarten have an end of year expectation level of 85.03 percent, a growth of 39 percent, whereas senior kindergarten children have an expectation level of 95.55 percent, a growth of 30.97 percentage points. In effect, the junior kindergarten children are expected to improve more and to catch up with the senior kindergarten group in gross-motor tasks.

This is the area which ranks fourth in amount of anticipated growth from beginning to end of the school year for junior kindergarten.

As noted previously, a possible anomaly in these estimates is that junior kindergarten children are anticipated as being at almost the same level as senior kindergarten children at the end of the school year, which means that they would enter their year of senior kindergarten at levels of performance which are a year ahead of the present senior kindergarten group.

29.5.3 Eye-Hand Co-ordination/Fine Motor Skills

There is a fairly high level of expectation for junior kindergarten for the beginning of the year on fine motor skills - 49.57 percent (mean score 2.61) similar to the level on gross-motor skills but not as high as on self help skills. It is anticipated by their teachers that considerable progress will occur during the school year, to reach an expectation level of 90.19 percent (mean score 1.74). There is considerable anticipated growth during the year, therefore, of 40.62 percentage points (or .87 of an ability category); the amount of growth ranks third for all areas, for junior kindergarten.

Senior kindergarten children are judged to start the year at a level slightly above that of junior kindergarten in eye-hand co-ordination skills with an expectation level of 56.97 percent (mean score of 1.03). This is only 7 percentage points difference. This is also distinctly lower than their expectation for the beginning of the year on gross-motor skills, i.e., on these findings, the senior kindergarten children are judged as relatively less competent in fine-motor/eye-hand co-ordination skills.

The end of year expectation is 92.87 percent, an anticipated growth of 35.9 percentage points or just over one ability category, which is less than for the junior kindergarten group. However, this amount of growth from beginning to end of year ranks third among all areas of development, for senior kindergarten.

Once again, junior kindergarten children are expected to be practically abreast of senior kindergarten in fine-motor skills by the end of the school year, which would place the junior kindergarten children one year ahead of the present senior kindergarten children in fine-motor development when entering the senior kindergarten year.

29.5.4 Pre-Reading Abilities

It is clear that "pre-reading" tasks are judged to be difficult for junior kindergarten children, with an expectation level, for the beginning of the year, of 24.61 percent (mean score 2.8).

However, considerable growth in ability is anticipated, of 43.96 percentage points to reach a moderate level of expectation, 68.57 percent (mean score 2.07).

This growth ranks second among all areas for junior kindergarten by the end of the year. It should be noted that half the tasks (8 out of 16) are perceived as difficult for any but the top third of children, with a high level of omissions for these items which indicates that the teachers judged them to be too difficult or possibly inappropriate.

Similar expectations are found for senior kindergarten children, despite their extra year of development and experience. Their expectation for the beginning of the year is 29.82 percent (mean score 2.66) and for the end of year is 64.6 percent (mean score 2.06), a growth of 34.78 percentage points, which ranks fourth for all areas for senior kindergarten.

A seemingly disturbing feature of these expectations is that the mean expectation for year end for the senior kindergarten children is actually lower than for the junior kindergarten children. Seven of the 16 items can be classified as "difficult" (i.e. a high proportion of omitted responses)which suggests that the senior kindergarten teachers saw these items as too difficult or inappropriate for their children, or as tasks appropriate only to some children in the top third of ability.

The impression one gains is that teachers consider they can make no informed judgments on several tasks in this list of pre-reading skills for the beginning of the school year, or that the tasks are judged to be inappropriate to the child's level of development and readiness.

One would suggest, therefore, that not too much reliance be placed on these particular expectations.

29.5.5 Pre Writing Skills

Pre-writing skills are very similar in pattern to pre-reading skills, i.e. levels of expectation are low and several tasks or skills are seen as having a high degree of difficulty or unpredictability. For the junior kindergarten group, all but one of the items are classed as "difficult/high degree of uncertainty" for the beginning of the year, and half of the tasks are classed as difficult even for the end of the school year. In the senior kindergarten group, three of the eight items are classed as difficult for the beginning of the year and expectations remain low for these items for the end of the year.

The beginning of year expectations for junior kindergarten are the lowest for any area of the program, at 18.92 percent (mean score 2.96), and the expectation level rises to only 42.79 percent (mean score 2.53) for the end of year. Moreover, anticipated progress in expectation during the year is very low (the lowest ranking for all 10 areas of the program), at 19.14 percentage points change. Thus, it is anticipated by junior kindergarten teachers that their children will not make marked progress in a number of "writing" skills during the school year.

The senior kindergarten expectation for the beginning of the year is also low, 32.60 (mean score 2.68) but significantly above that for the junior kindergarten. Expectation level rises to 65.86 percent for the end of the year, a level closely similar to that for pre-reading skills. There is also expectation of substantial change during the year, of 33.26 percentaged points or about three quarters of an ability category. In other words, there is expectation of significant progress in pre-writing skills in the senior kindergarten children during the year.

It will be of interest for the reader to inspect the tasks in pre-reading and pre-writing skills which are expected to be very difficult or inappropriate for kindergarten children.

29.5.6 Receptive Language Abilities

These abilities may be in many respects more "developmental" in nature at this age level than the tasks just discussed i.e. more subject to the effects of maturation and general experience including the influence of the home than to formal educational experience.

The junior kindergarten expectation for the beginning of the year is at a median level (49.53 percent) but rises to a high level, of 82.33 percent for the end of year. Anticipated growth in this area of skills during the year is therefore 32.8 percentage points, which ranks at the median among all areas for the junior kindergarten groups.

The senior kindergarten children are expected to start the year at a higher level than the junior kindergarten in receptive language skills, 61.1 percent, and to rise to a high level of expectation, 94.5 percent, by the end of the school year.

Anticipated growth is 33.4 percentage points, which is near the median for all areas, for the senior kindergarten group. It is closely similar to the expected growth for the junior kindergarten group.

Language development is therefore expected by teachers to be at similar rates in the two age groups. Once again, there is the paradox that the junior kindergarten group are expected to overtake the senior kindergarten group in performance on receptive language at the beginning of the senior kindergarten year.

29.5.7 Expressive Language

It is of interest that expectation levels for expressive language are distinctly lower than for receptive language for the junior kindergarten children, and significantly lower for the senior kindergarten children. This means that expressive language skills are perceived as being more difficult or that the level of expressive language ability is lower than that for receptive language ability in kindergarten children.

The junior kindergarten children have a beginning-of-year expectation level of 34.65 percent, which is fourth lowest among all areas of the program. However, this only encompasses 5 items. The other 6 were either considered too difficult or appropriate to the top 1/3 of ability only. Expectation level of the end of year is a moderate 65.76 percent; progress over the year is therefore anticipated to be a significant 31.11 percentage points. Senior kindergarten expectations for the beginning of the year are 35.02 percent which includes all items.

The senior kindergarten children are judged as likely to reach a high level of competence - an expectation level of 81.33 percent (mean score 1.90) Very considerable growth in language competence is anticipated - 46.31 percentage points.

Several expressive language items (6 out of 11 for the beginning of the school year) are perceived as difficult for junior kindergarten children by their teachers i.e. appropriate to the top third of ability only; however, expectations for the end of the school year indicate that junior kindergarten children in the middle and lower thirds of ability are by then considered capable of mastering these linguistic structures. They are: use of complex sentences, stringing 3 - 6 sentences together in a statement using correct regular and irregular plurals, and mastery of the irregular past tense.

The reader is referred to the complete list of expectations for a description of the language structures or tasks involved.

In the following chapter, expectations for performance on selected language items, receptive and expressive, are compared with the actual ratings made by teachers on children's performance on these items.

29.5.8 Number-Mathematics Concepts and Skills

This is an area of rather low expectation for the junior kindergarten group; expectation level of the beginning of the year is 31.54 percent (mean score 2.77) but rises to a moderate level of 63.9 percent for the end of the year. Significant progress during the year, of 32.36 percentages points, is expected.

Seven out of 18 items are "difficult" at the beginning of year for this age group (i.e. have a high proportion of omitted answers indicating that teachers consider that the tasks in question are too difficult, or inappropriate for the majority of children). Four items remain "difficult" in the end of year expectations.

Senior kindergarten expectations also begin at a modest level, 45.57 percent (mean score 2.47) though well above the junior kindergarten level. They rise to a high level for end of year, 80.11 percent (mean score 1.57). The anticipated progress is 36.54 percentage points, which is the second highest for all areas of the program, for senior kindergarten.

Items judged difficult or inappropriate for junior kindergarten include those which would normally be taught in school and require an appropriate level of readiness, e.g., counting in 2's, giving the addition combinations within 5, matching orally named numbers with printed numbers, printing numbers, telling the time to half-hours and using a ruler to match a line exactly.

In the following section, there is a comparison of the expectation levels on several number-math tasks with the actual performance of children on these tasks.

29.5.9 General Knowledge/Cognitive Abilities

This is a catch-all category for a number of tasks which measure the child's general knowledge or response to experience, e.g. naming colours, knowledge of the days of the week, the months, the seasons, ability to distinguish left from right, and a task known to measure developmental level and non-verbal "intelligence" - the "Draw a Person" test. This category is therefore likely to measure the child's developmental level and background, including a heavy component of language skills, rather than specific educational tasks as previously discussed, such as pre-reading, pre-writing and number skills.

The junior kindergarten group have a moderate level of expectation in this area for the beginning of the year, 38.64 percent (mean score 2.84) and expectation level rises to a moderate level for the end of the year, 64.42 percent (mean score 2.09). There is a rather modest anticipated increase in competence over the year, of 25.78 percentage points, which ranks eighth out of ten for all areas.

Expectations for senior kindergarten for the beginning of the year on these tasks is not very much above that for junior kindergarten, 42.58 percent (mean score 2.43), but the end of year expectation level is an astounding 90.93 percent. The anticipated progress during the year is dramatic, 48.35 percentage points or 1.86 of an ability category. This amount of change is the greatest for all areas, for the senior kindergarten group.

Several of these tasks are perceived as difficult for the junior kindergarten groups. Seven out of the 11 items are classified as "difficult" for the beginning of the year, and four items at this level also have low levels of expectation in the senior kindergarten group. They relate mainly to: knowing the days of the week, the seasons, months of year, and the date i.e. time and language concepts. Distinguishing right from left on one's own hands is also, correctly, seen as difficult for kindergarten children.

Expectations on tasks requiring naming colours are compared with the actual performance of children on these tasks in the following section.

29.5.10 Social-Personal Skills

The social personal skills are very important for the child's adjustment and learning in school. The tasks dealt with here relate to the child's ability to select appropriate play materials, sustain interest in self-directed activity for 10 minutes, be able to wait for the use of a preferred toy for 5 to 10 minutes, co-operate with 2 to 3 others, share within a group and take turns. In many respects, these abilities are developmental, but they are affected by the child's social background and experience and are the subject of attention by teachers because of their importance as a foundation of learning.

Teachers' ratings of children's social skills (see previous chapters) indicate that they view children as having a high level of competence in this area. Previous discussion of the involvement of children in various activity areas and of the ways in which learning groups are organized casts a light on the actual performance of children, and the importance of social-personal techniques for learning in school.

The junior kindergarten children are judged to begin the school year at a moderate level of competence (expectation level 43.4 percent: (mean score 2.46) but to rise to an anticipated level of 91.11 percent at the end of the school year. This is a dramatic anticipated increase in competence of 47.71 percentage points, the highest for all areas for the junior kindergarten group.

The junior kindergarten children are therefore perceived as beginning at a moderate level but learning rapidly in the area of social personal skills involved in sharing, co-operating and using learning materials effectively. It will be recalled that the analysis of objectives and of classroom procedures and organization by junior kindergarten teachers suggests that they attach considerable importance to the stimulation of active learning and the acquisition of those techniques and attitudes which will make the child a more manageable and effective member of the learning group.

The senior kindergarten children are perceived as being significantly more competent to start with, at an expectation level of 63 percent at beginning of the year, but to continue to progress, to reach an expectation level of 96.65 percent by the end of the year, an anticipated progress of 33.61 percentage points or .9 of an ability category.

The contrast in progress between this area and that of pre-writing skills is most marked for the junior kindergarten group.

The differences in levels of expectation (or "difficulty" or appropriateness of tasks and skills) in the different areas of the program have been pointed out throughout this discussion.

There have also been constant reminders of paradoxical results i.e. the implication that the performance of the junior kindergarten children will equal that of the senior kindergarten children in many tasks by the end of the school year, and the further paradox that children are rated as more competent by their junior kindergarten teachers than they will be according to senior kindergarten teachers when those children in their turn enter the senior kindergarten year. As pointed out, this finding suggests that either the junior kindergarten teachers overestimate the abilities of their children, particularly in the future, or that senior kindergarten teachers underestimate the abilities of their children. Or it could be concluded, especially from a study of the "difficult" items, where there was a high proportion of omissions, that teachers did not have the knowledge to make an informed and valid decision on some tasks and skills.

The comparisons made in the next chapter between expectations for certain tasks and actual performance of children on the same or similar tasks sheds a little light on this issue.

It is of interest that there is very little agreement between the junior and senior kindergarten groups in the amount of change or progress between beginning of year and end of year expectations. The rank order correlation is only .24, which is not significant and indicates a mere chance relationship.

29.6.0 Comparisons for the Junior Kindergarten

29.6.1 Language Abilities

Comparisons between expectations for certain language items and teachers' ratings on the same or similar items on actual children in the sample are of interest. Comparisons are made with ratings for "always uses" (the language item) and "always uses" plus "sometimes uses". (See previous chapter.)

Item 1: Child uses compound sentences

Expectation, beginning of year 12.5 percent; end of year 66.7 percent.

Teacher's rating, "always uses" 50 percent; "always plus sometimes" 72.4 percent.

Item 2: Child uses complex sentences

Expectation, beginning of year, *(42.9) percent; end of year 63.3 percent

Teacher's rating, "always uses" 21.8 percent; "always plus sometimes" 56.3 percent.

Item 3: Uses correct regular plurals

Expectation, beginning of year, *(50)percent; end of year 62.5 percent

Teacher's rating, "always uses" 67.2 percent; "always plus sometimes" 82.7 percent

Item 4: Uses irregular plurals correctly

Expectation, beginning of year, *(35.7) percent; end of year 66.7 percent

Teacher's rating, "always uses" 5.9 percent; "always plus sometimes" 51 percent

* This means only in top third.

It is clear that there is considerable variation between expectation and performance. The expectation for the first item is much too conservative compared with the teacher's rating criterion. By contrast, the expectation for item 2 agrees reasonably closely with the "always uses" level of performance.

The expectation for item 3 is too conservative as compared with the rating for "always uses" but within the same range of values; and is far below the "always plus sometimes" criterion.

By contrast, the expectation for item 4 overestimates actual performance on the "always" criterion, but underestimates performance on the "always plus sometimes" criterion.

The general conclusion is that "expectations" on these particular language items would be a rather poor guide to actual ratings of performance. It should be noted too, in the light of previous discussion, that the expectation levels for three of these items are based on only the top third of ability, and they have a high level of omissions i.e. they are "difficult" or "uncertain" items.

29.6.2 Self-Help Skills

Comparisons for self-help skills for junior kindergarten are as follows:

Item 1 Puts on shoes:

Expectation, beginning of year, 66.7 percent; end of year, 92.3 percent
Teacher's rating: 94.8 percent successful in putting on own shoes.

Item 2 Can go to washroom (combination of 2 similar items in expectation, 5 and 6)

Expectation, beginning of year, 84.6 percent; end of year 92.3 percent and 100 percent

Teacher's rating: 100 percent success.

Item 3 (a) Can dress in outdoor clothes (b) dress self with help

Expectation for (a) beginning of year 58.3 percent; end of year 100 percent

Teacher's rating for (b) 89.7 percent success.

Ratings and expectation agree quite well for item 2, but expectations appear to underestimate the level of rated performance for the other two items. It is, of course, possible as pointed out in a previous discussion of the levels of these ratings, Chapter 12 that the ratings themselves are optimistic.

29.6.3 Social-Personal Skills

Comparisons are as follows:

Item 1 (a) can co-operate with 2 others (b) child plays with 2 - 3 children

Expectation, (a) beginning of year, 50 percent; end of year 100 percent

Teacher's rating (b) 84.5 percent success.

Item 2 (a) can share toys and materials within group (b) shares when reminded

Expectation (b) beginning of year, 60 percent; end of year 84.6 percent

Teacher's rating (a) 96.5 percent

Item 3 (a) plays co-operatively with 3 - 4 children up to 30 minutes
(b) can co-operate with 3 - 4 children

Expectation (b) beginning of year, 33.3 percent; end of year 83.3 percent

Teacher's rating (b) 49.1 percent

Item 4 (a) can sustain interest in self-chosen activity for 10 minutes (b) plays independently when asked, for 10 minutes

Expectation (a) beginning of year, 40 percent; end of year 92.3 percent

Teacher's rating (b) 71.9 percent.

Once again, except for item 3, either the expectations vastly underestimate performance, or the ratings of performance are exaggerated.

29.6.4 Receptive Language

There is only one item for comparison.

Item 1 Can follow 3 directions

Expectation, beginning of year, *(50) percent; end of year 81.8
Test performance: 75.5 percent. (can follow 4 directions, 58.8 percent)

Again, the expectation level considerably underestimates performance level (which is based on objective assessments).

29.6.5 General Cognitive Abilities

There is only one item:

Item 1 (a) Can distinguish right-left on own hands (b) can show right hand and left foot

Expectation (a) beginning of year *(28.6 percent) end of year, 50 percent.

(b) teacher's assessment, 30.2 percent.

29.6.6 Gross-motor Skills

Comparisons are as follows. They are based on actual test results.

Item 1 (a) Can run 10 foot line, turn and run back/can walk 10 2 x 4 board on flat side; (b) can walk straight line for 10 feet.

Expectation (a) beginning of year 37.5 percent; end of year 75 percent
Test performance (b) 73.1 percent

Item 2 Catching a large ball

Expectation, beginning of year, 54.5 percent; end of year 91.7 percent

Test performance: 90.4 percent

Item 3 Catching a bounced ball

Expectation, beginning of year, 33.3 percent; end of year 83.3 percent
Test performance, 63.5 percent

There is clear evidence here that the expectation levels are all well below i.e. considerably underestimate the actual test performance of the sample of children studied.

29.6.7 Fine Motor/Eye-Hand Co-ordination Skills

Comparisons are as follows:

Item 1 (a) Can use scissors (b) can cut along straight line with scissors within 1/8 inch

Expectation (a) beginning of year 46.2 percent; end of year 92.3 percent
Test performance: 92.7 percent

Item 2 (a) Can cut approximate curve with scissors (b) can cut around square within 1/8 inch.

Expectation (a) beginning of year 16.7 percent; end of year 92.3 percent
Test performance: 56.1 percent.

The expectation levels for the beginning of the year again very considerably underestimate actual test performance. Item 1 (a) (expectation) seems to be easier than the task posed by the test; it is a matter of opinion whether cutting round a curve is more difficult than cutting round a square. The latter would appear to present more difficulty to children; nevertheless, the proportion of success on this task is much higher than the expectation level.

29.6.8 Number/Math Abilities

Comparisons between expectations and test-results are as follows:

Item 1 Concept of 3/ Give me 3 blocks

Expectation, beginning of year, 66.7 percent; end of year 100 percent.
Test performance - 58.6 percent can give 3 blocks or more.

Item 2 Concept of 5-6/Give me 5 blocks

Expectation, beginning of year, 36.4 percent; end of year 91.7 percent.
Test performance 44.8 percent; to count 5 blocks or more.

Item 3 Concept of 9-10/Give me 10 blocks

Expectation, beginning of year, 25 percent; end of year 54.5 percent
Test performance, 34.5 percent; able to count 10 blocks or more.

Item 4 Rote counting to 5

Expectation, beginning of year, 90.9 percent; end of year 100 percent.
Test performance (23.1 percent count 1-5) 88.9 percent can count to 5 or beyond to 20.

Item 5 Rote counting to 10

Expectation, beginning of year 54.5 percent ; end of year 92.3 percent.
Test performance 69 percent count to 10 or beyond

Item 6 Rote counting to 20

Expectation, beginning of year 11.1 percent; end of year 63.6 percent
Test performance 25.9 percent count 15 - 20.

Item 7, a, b, c, Counting up to 20 blocks (not specifically mentioned in expectation list)

(a) Counting up to 5 blocks:

Expectation, beginning of year, 90.9 percent; end of year 100 percent
Test performance 87.9 percent can count up to 5 blocks or more.

(b) Counting up to 10 blocks

Expectation beginning of year, 54.5 percent; end of year 92.3 percent
Test performance: counting at least 10 blocks 74.1 percent.

(c) Counting 20 blocks

Expectation, beginning of year, 11.1 percent; end of year 63.6 percent
Test performance: counting 15 - 20, 29.3 percent.

These results suggest that expectations for performance in number/math (specifically for number concept and counting) tend sometimes to under-rate the actual performance. It may be recalled that junior kindergarten teachers view many tasks in number/math as difficult and possibly inappropriate for new entrants to school. These confusions suggest they may be wrong.

29.6.9 Knowledge of colours

Comparisons are as follows:

Item 1 Can name 4 colours

Expectation, beginning of year 90 percent; end of year 100 percent.
Test performance at least 4 colours named, 88.7 percent

Item 2 Can name 8 colours

Expectation, beginning of year, *(71.4) percent end of year 100 percent
Test performance: at least 8 colours named, 75.6 percent.

There is quite close agreement in expectation for naming colours and actual score on test when this involves only the familiar situation of knowing the 4 basic colours. However, there is considerable under-estimation (expectations) of the actual level of knowledge of children.

29.6.10 Pre-reading skills

Comparisons are as follows:

Item 1 Can identify six letters by name (read)

Expectation, beginning of year, 62.5 percent; end of year 90.9 percent
Test performance: (reading selection of letters)

Lower case letters: 9.3 percent read 6 letters or more

Upper case letters: 17 percent read 6 letters or more

Item 2 Can identify small number of words by sight/can read a small set of words

Expectation, beginning of year *(7.1) percent; end of year 60 percent
Test score (Wide Range) 1 - 2 words 5 percent

The correspondence between expectation and performance seems poor for estimates of knowledge of letters, the expectation being very much too high; but there seems to be close agreement on the small number of words which the junior kindergarten child can be expected to read at the beginning of the year and actual performance level.

29.6.11 Pre-writing Skills

The following are the comparisons:

Item 1 Can print own first name

Expectation, beginning of year, *(64.3) percent; end of year 69.2 percent

Test performance: 35.2 percent

Item 2 Can copy letters

Expectation, beginning of year, 27 percent; end of year 74.4 percent

Test performance: 7 letters and numbers: not able to copy even one letter 10.5 percent, hence able to copy at least one letter 89.5 percent. Can copy 7 letters, 35 percent.

Item 3 Can copy 6 letters

Expectation, beginning of year, *(42.9) percent; end of year 66.7 percent
Test performance (as above): copying 6 letters or more, 21 percent

Expectations are generally much exaggerated, as compared with actual test performance in these pre-writing skills. It may be noted that the expectations are *items ("difficult/uncertain").

The situation is much as for pre-reading skills.

29.7.0 Comparisons for the Senior Kindergarten

29.7.1 Expressive language

The language items are compared, as for the junior kindergarten.

Item 1 Child uses compound sentences

Expectation, beginning of year, 25 percent; end of year 89.5 percent.
Teacher rating: "always uses" 63 percent; "always plus sometimes" 85.8 percent.

Item 2 Child uses complex sentences

Expectation, beginning of year, 20 percent; end of year 80 percent.
Teacher rating: "Always uses" 39.7 percent; "always plus sometimes" 77 percent.

Item 3: Uses correct regular plurals

Expectation, beginning of year, 36.7 percent; end of year 82.4 percent.
Teacher rating: "Always uses" 83.5 percent; "always plus sometimes" 93.7 percent.

Item 4 Uses irregular plurals correctly

Expectation, beginning of year,15.4 percent end of year 62.9 percent.
Teaching rating: "Always uses" 31.8 percent; "Always plus sometimes" 79.4 percent.

Expectations give marked under-estimates of the child's active performance in expressive language. One would not use expectations as a guide to language performance in kindergarten.

29.7.2 Self-Help Skills

Comparisons are as follows:

Item 1 Puts on shoes

Expectation, beginning of year 78 percent; end of year 97.6 percent.
Teacher rating of performance of children: 96.2 percent success.

Item 2 Can go to washroom (combination of 2 similar items 5 and 6)

Expectation, beginning of year, 97.6/95.1; end of year 100 percent.
Teacher rating of performance: 98.5 percent success

Item 3 (a) Can dress in outdoor clothes (b) dresses self without help

Expectation (9) beginning of year, 92.5 /end of year 100 percent.

Teacher rating of performance: (b) 97.7 percent success.

There is in general close agreement between expectation and performance on self-help skills at the beginning of the school year in senior kindergarten.

29.7.3 Social-Personal Skills

Comparisons for this set of skills, important for adjustment to the classroom, are:

Item 1 (a) Child plays with 2 - 3 children (b) can co-operate with 2 others.
Expectation (a), beginning of school year, 69.2 percent; end of year 100 percent.
Teacher rating of performance: 91.6 percent.

Item 2 (a) Child shares when reminded (b) can share toys and materials within group

Expectation (b) beginning of year, 63.9 percent; end of year, 95 percent.
Teacher rating of performance: (a) 98.5 percent.

Item 3 (a) Can co-operate with 3 - 4 children (b) Plays co-operatively with 3 - 4 children up to 30 minutes

Expectation (a) beginning of year, 58.8 percent; end of year 92.3 percent.
Teacher rating of performance: (b) 60.3 percent.

Item 4 (a) Can sustain interest in self-chosen activity for 10 minutes (b) plays independently when asked, for 10 minutes
Expectation (a) beginning of year, 65.8 percent; end of year 100 percent.
Teacher rating of performance (b) 85.5 percent.

Except for item 3 for which there is close agreement, the expectations considerably underestimate the level of performance, similarly to the junior kindergarten group.

29.7.4 Receptive language

Item 1 Can follow 3 directions

Expectation, beginning of year, 34.3 percent; end of year 95 percent.
Test performance: 88.1 percent (4 directions, 59.5 percent).

The expectation very considerably underestimates performance, though this is based on an objective assessment.

29.7.5. General/Cognitive Abilities:

Item 1 (a) Can distinguish right-left on own hands (b) can show right hand and left foot.

Expectation (a) beginning of year, 20.8 percent; end of year, 85 percent.

Test performance: 56.3 percent.

There is marked underestimate by expectation as compared with actual assessment of knowledge of right/left.

29.7.6 Gross-Motor Skills

Comparisons are with actual test assessments administered by teachers.

Item 1 (a) Can run 10 foot line, turn and run back/can walk 10 foot 2x4 board on flat side; (b) can walk straight line for 10 feet.

Expectations, beginning of year, 72.2/74.4 percent; end of year 92.1/95 percent.

Test performance: (b) 96 percent success.

Item 2 Catching a large ball

Expectation, beginning of year, 87.5 percent; end of year, 97.5 percent.
Test performance: 93.6 percent success.

Item 3 Catching a bounced ball

Expectation, beginning of year, 56.4 percent; end of year 97.5 percent.
Test performance: 79.2 percent success.

The expectations all appear to be rather below actual performance, as in the junior kindergarten group, but there seems to be rather closer agreement between the estimates for this area of the program, especially for item 2.

29.7.7 Fine Motor/Eye Hand Co-ordination Skills

Comparisons are as follows:

Item 1 (a) Can use scissors (b) Can cut along straight line within 1/8 inch.

Expectations (a) beginning of year, 92.3 percent; end of year 92.5 percent.

Test performance: (b) 97.3 percent success

Item 2 (a) Can cut approximate curve with scissors (b) Can cut round square within 1/8 inch

Expectation (a) beginning of year, 43.9 percent; end of year 95.1 percent
Test performance: 74.5 percent success

There is close agreement between expectation and actual performance on "ability to use scissors" at the beginning of the senior kindergarten year, but the expectation level of the child's ability to cut round a curve is far below actual performance on what is a more difficult task.

29.7.8 Number/Math Abilities

Comparisons are as follows:

Item 1 Concept of 3 -/Give me 3 blocks

Expectation, beginning of year, 84.2 percent; end of year 90 percent
Test performance: 95 percent can give at least 3 blocks.

Item 2 Concept of 5 - 6/Give me 5 blocks

Expectation, beginning of year, 78.9 percent; end of year 94.9 percent
Test performance: 94 percent can give at least 5 blocks.

Item 3 Concept of 9 - 10/Give me 10 blocks

Expectation, beginning of year, 32.4 percent; end of year 95 percent
Test performance: 84 percent can give at least 10 blocks.

Item 4 Rote counting to 5

Expectation, beginning of year, 97.4 percent; end of year 97.5 percent
Test performance: 98.5 percent can count to at least 5.

Item 5 Rote counting to 10

Expectation, beginning of year, 92.3 percent; end of year 100 percent
Test performance: 95 percent count to at least 10 or over

Item 6 Rote counting to 20

Expectation, beginning of year 34.2 percent; end of year 94.9 percent
Test performance: counting 15 - 20, 76.3 percent

Item 7 Counting up to 20 blocks (not specifically mentioned in expectations list)

(a) Counting up to 5 blocks

Expectation based on above (counting) - beginning of year 97.4 percent.
Test performance: Counting at least 5 blocks 95.4 percent.

(b) Counting up to 10 blocks

Expectation based on above (counting) - beginning of year 92.3 percent
Test performance: Counting at least to 10, 89.8 percent.

(c) Counting up to 20 blocks

Expectation based on above (counting)- beginning of year 34.2 percent.
Test performance: (15 - 20) 76 percent.

These results suggest that expectations and estimates of performance in rote counting and simple concepts are remarkably close, for those numbers - up to 10 or so - which are most familiar and highly reinforced by experience for children and on which teachers may focus much of their observation and early teaching. However, expectations for "larger" numbers i.e. up to 20 underestimate considerably the ability of children to count or to relate counting to a concrete series of objects. Strangely, the agreement between expectation and performance for the "larger numbers" is less for the senior kindergarten group than for the junior kindergarten.

29.7.9 Knowledge of Colours

Comparisons are as follows:

Item 1 Can name 4 colours

Expectation, beginning of year, 82.5 percent; end of year 100 percent.
Test performance: at least 4 colours named, 95.9 percent.

Item 2 Can name 8 colours

Expectation, beginning of year, 64.9 percent; end of year, 100 percent.
Test performance: at least 8 named, 85.2 percent.

As with number skills, there is good agreement for the simple familiar items (knowledge of 4 basic colours) but senior kindergarten teachers significantly underestimate the actual knowledge of colours possessed by their children.

29.7.10 Pre-Reading Skills

Comparisons are as follows:

Item 1 Can identify six letters by name (read)

Expectation, beginning of year, 30.6 percent; end of year 92.3 percent.
Test performance: lower case letters: 55.8 percent read 6 letters or more; upper case letters: 68.3 percent read 6 letters or more.

Item 2 Can identify a small number of words by sight/read a small set of words.

Expectation, beginning of year,*(7.7/14.3)percent; end of year 50/25 percent.
Performance (Wide Range Test) 1 - 2 words, 11.5 percent.

Expectations for identifying/reading letters appear to underestimate children's abilities considerably, but there is good agreement between expectations and performance on the proportion of children who can be expected to be able to identify a small number of words. It should be noted that the words tested are 3 and 4 letter words, chosen for familiarity and it would be unlikely children could encounter much easier words. To be able to read a few words on Level 1 of this test earns a grade 1 level.

Both junior and senior kindergarten teachers appear to be ill at ease in estimating reading abilities, or to have rather ambiguous perceptions of the developmental levels and demands on children involved.

29.7.11 Pre-Writing Skills

The following are the comparisons:

Item 1 Can print own first name

Expectation beginning of year, 51.4 percent, end of year 97.6 percent
Test performance: 65.4 percent.

Item 2 Can copy letters

Expectation, beginning of year, 55.6 percent; end of year 95.1 percent.
Test performance: (7 letters and numbers) not able to copy one letter, 1.5 percent, hence should be able to copy at least one letter 99.5 percent. Can copy 7 letters 48.1 percent.

Item 3 Can copy six letters

Expectation, beginning of year, 55.9 percent; end of year 92.5 percent.
Test performance: copying 6 letters or more, 74.8 percent.

Expectation of the child's ability to print his own name (basically a developmental item) slightly underestimates performance, but the agreement is reasonably close in the terms of this study. There is clearly some lack of clarity in teachers' judgments about pre-writing skills: on a rather general objective, which suggests that the child has high competence, (i.e. "can copy letters") the expectation underestimates the capacity of the senior kindergarten child. The tests show that he can begin to cope with minimum requirements for this task, within the first three months of school.

29.8.0 General conclusions

This comparison of expectations and teachers' ratings of children or objective test assessments administered by teachers for the same or closely similar items would lead to the conclusion that expectations and actual estimates of performance can differ considerably, with very marked over or under estimation of actual performance. In some areas, such as specific tasks in number, self help and in the motor skills, where teachers are probably better acquainted with children's developmental levels, expectations appear to be reasonably valid. In other areas, and notably in the academic areas of pre-reading and pre-writing, much less reliance can be placed on the validity of expectations. Here expectations are compared with teachers' ratings (e.g. of self-help skills, social-personal skills and language). It might be contended that two closely similar kinds of personal (and possibly subjective) estimates are being compared. If they are similar, they should agree much more than they do. The fact that "expectations" can vary so much from ratings of performance paradoxically tends to confirm the independent validity of the teachers' ratings of performance. Where evidence based on ratings alone is concerned it might be difficult to establish unequivocally whether expectations were (as often occurred) underestimates of the true performance or, by contrast, whether the ratings of children overestimated the true level of development or performance. It could also be true that both kinds of estimates have their own and opposite bias, one to underestimate and the other to overestimate simultaneously. However, it is difficult to see why objective task assessments taken from developmental scales or educational tests and administered by teachers, under proper control, should overestimate children's performance consistently. It must be concluded that expectations often underestimate well-documented and objective performance by children.

Throughout this discussion, it has been shown consistently that there is an anomaly between the levels of expectation for the junior kindergarten group and for the senior kindergarten group, if one bears in mind that the present junior kindergarten children (beginning of school year) will be potential senior kindergarten children by the end of the school year. There appears to be little difference in expectation levels between junior kindergarten and senior kindergarten children on many items of performance for end of year, despite the fact that there is a year of very considerable growth differentiating the junior and senior kindergarten children.

Whereas estimates of performance for the beginning of the year are often underestimated, expectations for end of year performance seem very high for many items.

The "educational" items, i.e. those more subject to school experience and to teaching than to simple maturation and development, seem to be those which are expected to show the most dramatic progress.

Teachers' "expectations", as defined in this chapter, may have their own internal consistency, but are in general poor guides to assessing or predicting children's performance or a considerable variety of developmental or educational skills early in the first year of school. Expectations for the end of the school year are likely to be even less firmly based.

CHAPTER 30 – TEACHERS' EXPECTATIONS AND KINDERGARTEN EXPERIENCE

A question which arises regarding teachers' expectations of their children's performance is whether these expectations are affected by the fact that the children have or have not had the opportunity to be in a junior kindergarten.

Ten expectations by senior kindergarten teachers were selected at random, and cross-tabulated on whether or not their children were likely to have been in junior kindergarten previous to attending kindergarten.

The majority of the differences between groups with junior kindergarten membership and no junior kindergarten memberships were non-significant.

The significant associations did not form any particular pattern.

They were: "that the child can string together 3 to 6 sentences" at the end of the year (chi square probability .025, correlation probability .023 (r: .328). Teachers with children who had no junior kindergarten experience had higher proportions in the upper third of ability.

Another was: "concept of one more", for beginning and end of year. Correlation probability was .024 (r: .347) for beginning of year, .043 (r: .287) for end of year. A higher proportion was found in the upper third of ability and fewer in middle third for teachers with children who had been in junior kindergarten experience(beginning of year) and the same pattern for end of year.

The last item was "knows months of year" (end of year), with chi square probability. .01, correlation probability .03 (r: .340), higher proportion in upper third for teachers with children who had junior kindergarten experience.

It can be concluded that there is no good evidence that teachers' expectations are systematically and consistently affected by the fact that their children have or have not had previous junior kindergarten experience.

30.1.0 The Teachers' Experience, Characteristics of the Classroom, Views on Motivation and Discipline and Educational Views

The teachers' experience was cross-tabulated with a number of sample variables to establish if there was any significant association.

30.1.1 Teachers' Experience and Classroom Conditions

There was no significant association between years of experience (senior kindergarten) and: total equipment in classroom, but a significant association (.02 level of probability) with whether children are grouped for learning activities.

30.1.2 Motivation and Discipline

There were no significant associations with beliefs about methods of motivation and discipline, except for "showing a child an example of another child's appropriate behaviour" (correlation significant at .0004 level of probability; r .447)

30.1.3 Educational Viewpoints

The majority of associations between teachers' experience and educational viewpoints were non-significant.

Exceptions were: associations with (1) "Young children should be encouraged to work from patterns of models in their beginning art work (probability .03/.02) (the greater the experience, the higher the disagreement); with (2) "Children learn best when there is fairly good order about noise level in the room"(probability .04/.02) (the greater the experience, the higher the agreement); with (3) "Children should be encouraged to ask the teachers' permission before beginning a new activity on their own". (probability .03, the greater the experience, the more the disagreement with this item); with (4) "The home is the source of most of the difficulties children have in school" (probability .04, the greater the experience, the more the agreement with the item); with (5) "Each day's activities should be derived almost entirely from children's interests .... etc." (probability .04, the greater the experience, the greater the agreement with the item) and: with (6) "Parents should be involved in planning pre-school and kindergarten activities" (Probability .04, the greater the experience, the more disagreement with the item).

30.1.4 Teachers' degree qualification

There was no significant association between the teachers' possessing a bachelor's degree, and commitment to planning the program, the total amount of equipment in the classroom, or practice in grouping children for learning activities.

30.1.5 Differences Between Boards of Education

There was a slight but significant difference (probability .02) between the boards of education in the sample in respect of report cards.

There was a significant difference (probability .003) between boards in respect of the degree to which they had "open classroom". There was a tendency for the few "open" classrooms to be found in the large urban areas.

There was also a slight but significant difference (probability .04) between boards in "Total equipment available in classroom".

30.1.6 Equipment in Classroom, and Educational Viewpoints

Not unexpectedly, there were mainly non-significant associations between total equipment in classroom and educational viewpoints of teachers, in both junior and senior kindergarten.

In the junior kindergarten group, there was a slight significance (probability .024) between total equipment and disagreement with the belief "It is important to include a number of activities about children's own cultures and ethnic groups", and disagreement with "Children should have assigned seats and places for at least part of the school day" (probability .02).

In the senior kindergarten group, there was a slight but significant association (probability .02) between total equipment and agreement with the belief, "It is important to include a number of activities about children's own cultures and ethnic groups". This is the reverse of the junior kindergarten relationship - a negative relationship (probability .02). Here was a significant relationship between "Children learn best with good order and a low noise level".

These associations with equipment of classroom may well be due to other underlying or related factors which are more directly related to educational beliefs and objectives e.g. length of experience of teacher, or degree of progressive or conservative attitudes to education based on activity and experience.

It might be noted that occasional "significant" relationships can arise purely by chance. For example, relationships significant at the .05 level (many of the above) could arise approximately once in 20 times by chance. It is likely that several of the scattered and often curious relationships observed among a majority of non-significant relationships are in fact due to chance.

30.2.0 Teachers Stated Objectives and Commitment of Time to Specific Activities

Teacher's stated objectives have some similarity to their "expectations" for children. They are general statements of intent and belief. It would be of interest to find out how these objectives are realized in planning and implementing the program day by day; evidence on this would be difficult to obtain and define, and in any event was not available to this study. However, another criterion was available. It will be recalled that teachers estimated the amount of time they would devoted to specific areas of the program.

Teachers' objectives were cross-tabulated with these estimates of time per activity, which is nearer the teachers' actual practice in the classroom.

Out of a large number of associations tested between verbally stated objectives and estimates of time to be allotted to specific activities, the majority were non-significant.

Even where there were significant associations, there were few clear, meaningful patterns.

30.2.1 In the junior kindergarten group, the observed significant associations were as follows:

Time committed to Oral Language was significantly associated with objectives: productive language skills; auditory discrimination; visual discrimination; preparing the child for the next stage of education. This is a relatively coherent set of associations which suggest that objectives relating to language, possibly pre-reading, and preparation for the following stage of education are perceived as significantly related to time allotted to oral language. This would be consistent with the emphasis on language observed in teachers' description of children' involvement in activities, and the high priority given to language in kindergarten teachers' objectives.

Another grouping was:

Time allotted to Pre-reading was significantly associated with objectives: creativity, imagination and fantasy; physical/motor skills.

There appears to be no obvious rationale for this grouping.

Time allotted to Creativity was significantly associated with objectives: physical and motor skills; art and crafts; and sensitivities and appreciation. This makes a coherent pattern i.e. creative work can be designed to foster fine motor skills, is directly related to art/craft objectives and is intended to foster sensitivity.

Time allotted to Music was significantly associated with objectives: physical and motor skills; sensitivities and appreciation. Again, there could be a connection, as there is for creativity.

Time allotted to Math and Number was significantly associated with objectives: receptive language skills; expressive language skills; auditory discrimination; arts and craft. There is no discernible pattern here except with a cluster of general objectives, emphasizing language (and possibly pre-reading) which are viewed as the most important in the kindergarten program.

Time allotted to Health and Safety Activities was significantly associated only with the objective: ability to form letters and numbers.

Time allotted to activities related to the Personal-Social Environment was significantly associated with only the objective: ability to form letters and numbers.

Both the above associations have little obvious sense.

Time allotted to Environmental Studies was significantly associated with objectives: ability to form letters and numbers; physical and motor skills.

There is no obvious rationale here either.

Time allotted to Explanation of Classroom Rules and Procedures was significantly associated with objectives: physical and motor skills; and preparing the child for the next level.

The first objective does not make much sense in this connection; it can be argued that explaining classroom rules and procedures (a more significant part of the time allocation in junior kindergarten than in senior kindergarten) is a means of preparing children for the next stage.

30.2.2 In the senior kindergarten the observed significant associations were as follows.

Time committed to Pre-reading was significantly associated with objectives: general information about health and safety; expressive language skills; auditory discrimination; ability to form letters and numbers; problem solving activities; art and craft skills; creating good feelings about learning and school in the child.

Some of this cluster (language, auditory discrimination and forming letters, etc.) make sense as objectives related to pre-reading but it is difficult to see how the others are related to pre-reading.

Time committed to Pre-writing activities was significantly associated with objectives: information about health and safety; ability to form letters copying with cognitive/intellectual demands; preparing the child for the next level. The ability to form letters and numbers is obviously the same activity as "pre-writing activities". There is also some association, not superficially evident, between objectives relating to health and safety activities (which had generally low priority), as discussed in a previous chapter and the basic literacy activities. "Preparing for the next level" (kindergarten) is fairly clearly an objective which would be fulfilled, in the view of some teachers, by "pre-writing" activities.

Time committed to Math Activities was significantly associated with objectives: creativity, imagination and fantasy; ability to cope with cognitive/intellectual demands; ability to cope with personal-social demands; sensitivities and appreciations.

Math is an extremely important part of the curriculum, but it is rather startling to find it to be such an all-purpose and comprehensive activity, serving practically every major objective in the curriculum.

Time committed to Problem-Solving Activities was significantly associated with the objectives: auditory discrimination; problem solving abilities; and sensitivities and appreciation. The connection with objectives related directly to problem solving is an obvious and expected one. There is some slight evidence throughout this discussion that "auditory discrimination" objectives may be perceived as making demands on children for cognitive/intellectual abilities, or as a problem-solving activity. The connection with sensitivities and appreciation is, as with Math, not immediately evident.

In both junior and senior kindergarten groups, the associations between objectives and time allocated to specific activity areas are for the most part non-significant. Even where there are significant associations, the patterns which group together different objectives around a given activity do not always have a clear and obvious meaning; indeed, the cluster of objectives around priority of time commitment to Math and Problem Solving activities appear to be very wide and diffuse.

In general, it can be concluded that there is no clear, direct connection between stated objectives of a general kind (intents) and planned allotment of time to specific important activity areas in the program. They are, in effect, separate and distinct aspects of the teachers' concepts, constructs and practices. General objective or beliefs (intents) are not directly related to practice; it would be difficult to use one domain to predict or explain the other.

30.3.0 Teachers' Educational Viewpoints and Commitment of Time to Specific Activities in the Program

Teachers were asked (as described in a previous chapter) to indicate their agreement or disagreement with a variety of commonly held educational viewpoints. This set of questions represents teachers' beliefs and attitudes; it would be expected to overlap with teachers' statements of educational objectives.

As with teachers' stated objectives, it is of interest to relate educational beliefs and attitudes to planned practice, as represented by estimates of time devoted to various important activities in the curriculum.

For both junior and senior kindergarten groups, there was very little connection between educational viewpoints and estimates of time spent on various activities. The majority of associations which were tested were non-significant.

For the junior kindergarten group, significant associations were as follows:

30.3.1 Time allotted to Oral Language was highly significantly associated with the viewpoint that "Traditional children's literature has a definite place in the kindergarten program.

Time allotted to Problem Solving activities was significantly associated with rejection of the view that "The use of games, etc., should be restricted to free play periods".

30.3.2 For the senior kindergarten group, significant associations were as follows:

Time allotted to Oral Language was significantly associated (slight) with the viewpoint that "Each day's activities should be derived almost entirely from children's own interests and spontaneous questions, or incidents that occur in the environment".

Time allotted to Health and Safety Activities was significantly associated (slight) with the viewpoint that "Children will make most intellectual and personal-social progress if the teacher is from the same ethnic group as the majority of the class".

Time spenton activities relating to the Social Environment was significantly associated with the viewpoint that "Most of the objectives of junior kindergarten or early school education are too intangible to measure"; with "Each day's activities should be derived almost entirely from children 's own interests ... etc." and with "Sensitive content such as sex, death, birth, should be avoided as much as possible in kindergarten classroom".

The connection between commitment to oral language activities and emphasis on activity-interest as a major factor in kindergarten education makes educational sense. The emphasis on health, safety and self-help activities can be seen as being connected with the belief that children's interests are best served by having a teacher of the same ethnic group as the majority of the class and therefore presumably understanding the children better; it would make sense to some teachers who are dealing with classes with a high proportion of a specific ethnic group who might also have particular needs for help with health, safety and self-help activities because they formed a new-Canadian or disadvantaged group, as occurred in one of the major "inner city" samples in this study.

Apart from these associations, it would be generally correct to conclude that teachers' educational viewpoints (expressing beliefs and attitudes) have little direct connection with the pattern of planned allocation of time to important areas in the curriculum i.e.belief does not relate directly to practice. The connection is even weaker and less direct than the connection with teachers' educational objectives. It is evident that both educational viewpoints (beliefs) and commitment to educational objectives must direct and shape teachers' decisions and practices in much more general and indirect ways, not observable in these data.

PART V

INTERRELATIONSHIPS BETWEEN FORMS

CHAPTER 31 – SOCIO-ECONOMIC STATUS AND EDUCATIONAL LEVEL OF PARENTS AND THEIR CORRELATES

A considerable body of research confirms that socio-economic status of the family is significantly related to several other social variables and to educational achievement.

Analyses were conducted of the relationship between (1) parental socio-economic status (assessed on the Blishen scale of occupational level and status) and (2) parental educational levels,and a number of variables.

31.1.0 The relationship between mothers' and fathers' socio-economic status/educational level.

Since information was available on both father's and mother's socio-economic status (which is not usually obtained in most research studies), it is of interest to look at the relationship between these two; it is also of interest to compare the relationship between father's socio-economic status and father's educational level; between mother's socio-economic status and mother's educational level; and, finally, the relationship between father's educational level and mother's educational level.

All these relationships turn out to be high and positive.

They are set out in the following table for the senior kindergarten age-group:

		F2	F6	M2	M6
F_2	(Father's socio-economic status)	1.00	.7827	.5762	.6010
F6	(Father's educational level)		1.00	.4627	.5697
M2	(Mother's socio-economic status)			1.00	.6918
M6	(Mother's educational level)				1.00

It can be seen that all these relationships are very similar, the highest correlation being between father's S.E.S. and educational level and the lowest between mother's S.E.S. and father's educational level.

The means of the correlations of each variable with all the others are remarkably similar: father's S.E.S. with all others .6533; mother's educational level with all others .6208; father's educational level with all others .6050; and mother's S.E.S. with all others .5769. There is no significant difference between these average correlations. This finding confirms that the two variables, socio-economic status and educational level are highly related and behave in much the same relationship for both mother and father.

However, within this general pattern of close agreement, there are some interesting differences. It seems as if father's socio-economic status is correlated to the same high degree (about .60) with both socio-economic status and educational level of mother. Father's educational level is also correlated at this same level with mother's level. However, the correlation between mother's socio-economic status and father's educational level is distinctly lower. There is more likely to be a discrepancy between mother's socio-economic status and father's educational level than between the other measures for either mother or father. In effect, mother's socio-economic status may have a specific factor.

However, a strong general factor linking all the measures could be extracted from these relationships; since they behave in closely similar fashions, it would be expected that other measures would have similar relationships to socio-economic status and to educational level of parents. Both measures could be summed and averaged to give a more reliable measurement for a given parent; the socio-economic status measures, or the educational level measures could be summed and averaged for parents. It would also be valid to take total scores on both measures for both parents to obtain a composite score of socio-economic status plus educational level, though the value of this would be reduced by the fact that the mother's socio-economic status has a tendency to a specific relationship with father's educational level.

In a general sense, it can be said that both parents tend to come from, or arrive at, a similar educational level; and that they have at this point in time arrived at a similar occupational level. (The reader is referred to discussion in a previous section of the report, of the actual levels reached by parents.) It has been suggested that mother's socio-economic level (occupational status) may mean something different or behave differently in its effect on other measures from father's socio-economic status, since father's socio-economic status is based on his present occupation and may be improved by promotion, seniority, or further education or training, whereas mother's occupation often refers to occupation before marriage and may not be subject to the same opportunities for "up-grading", at least while a young family has members in the pre-school stage.

Since the effects of father and of mother's socio-economic status may be different on some measures, in spite of their high intercorrelation, it is of interest to discover whether father's S.E.S. has greater weight than mother's on important developmental or test measures. Related to this is the question whether controlling for the contribution of father's S.E.S or educational level, or both, to particular measure (by means of a partial correlation analysis) will reduce the effect of the contribution of the mother's S.E.S. or educational level more than the reverse procedure of controlling for mother's S.E.S. or educational level, or both, and assessing how this reduces the contribution of the father's S.E.S. or educational level.

This analysis is carried out later, when the relationship of socio-economic status and educational level of both parents to test scores is analyzed. A regression analysis of relationships between socio-economic status, educational level and educational variables in the home was also carried out.

31.2.0 A multiple regression analysis was carried out to predict and analyze the relationships involved in the measures on Form 1 (home interview) "Parent reads to the child".

There were no significant relationships with the variables in this order: father's educational level, father's S.E.S., whether magazines are bought specially for the child, and number of rooms in house. Permutations of these variables and their order produced no significant relationships (multiple correlation, squared multiple correlation contribution to test variance or significant of the variables as estimated by F test).

It can be concluded, therefore, that the measure "Parent reads to the child" is a specific, independent variable. It will have its own unique contribution to make to any description of the family's "educational" behaviours.

31.3.0 Regression analyses were carried out to predict and analyze the relationships involved in the amount of TV watching done by the child in the evening. There were no significant relationships with father's educational level or S.E.S., or buying a magazine specially for the child. However, there was a relationship which was just below significance (F test) with number of rooms in dwelling (low number of rooms). This also is therefore a "specific" variable.

31.4.0 Regression analyses were carried out on the item. Yes: did have a chance to talk to teacher and/or principal before the child started school in September. There was no significant relationship with the variables: father's S.E.S. educational level, buying magazines specially for child or number of rooms in dwelling. Similarly, there were non-significant relationships for the response; NO: parent did not have a chance to talk to principal/teacher before the child started school.

31.5.0 In regression analyses carried out on the item Expectation 1 (Would expect child to be in the top 1/3 in ability in the class), father's S.E.S. was a significant predictor (F ratio of 5.4 significance = .05) but none of the other variables was significantly related.

In regression analyses carried out on the item Expectation 2 (Occupation or schooling parent expected of the child), both father's S.E.S. and educational level were significantly related to the item, each adding a separate contribution to the regression equation. (Upper level S.E.S. and upper level educational level.) Comparison of the order and significance of variables in different patterns in the various regression equations showed that the father's educational level made the greatest contribution to this item.

31.6.0 A regression analysis was also carried out of the total score on the nine "developmental skill" items (mainly self-help and social-personal skills) checked by parents. (See Part 1 of the report.)

The only variable with a significant contribution is: " Do you buy magazines specially for the child"; interestingly, this has a negative beta weighting, which implies that the child will tend to be rated higher on self-help skills by parents if he/she has not bought magazines intended especially for children.

The outcomes of these trial regression analyses, in which the various predictor variables are added in turn, in various orders, to see what their specific and joint contribution will be, suggest that the home/educational measures used as dependent variables (Whether child is read to; whether magazines are bought especially for child; whether parents did or did not have an interview with the teacher/ principal before the child went to school; level of expectation for the child's ability as compared with others in the class; and level of developmental self-help/social skills as rated by parent)- all tend to be specific, independent items. The major relationship, where it occurs, is with father's educational level and socio-economic status.

This is a useful and interesting finding, since it means that these measures can be used to describe and assess "educational" aspects of the home more or less independently of other important variables.

?1.7.0 Similar regression analyses were carried out, but using the mother's educational level as one of the predictors.

As when the father's S.E.S./educational levels were used (above) there were low and non-significant relationships of the predictor variables with the measure: parent reads to child.

There were low and non-significant relationships with the item: Amount of time spent by child watching TV in the evening with the possible exception of "number of rooms in dwelling (low)", where the relationship approached significance.

There were low and non-significant relationships with the item: YES: Parent did have opportunity to have interview with teacher/ principal before the child entered school.

However, there was a significant relationship between mother's educational level and the item NO: Parent did not have opportunity to have interview with teacher/principal before the child entered school (the relationship being greatest with the lower levels of education, as might be expected).

There were no significant relationships with the item relating to the expectation of the parent for the child's ability in relation to the rest of the class (in upper, middle and lower thirds). Nor were there any significant relationships with the item relating to the parent's expectation of or hope for the child's final occupational level.

The only measure which had a significant relationship with the child's total developmental score on self-help and social skills as rated by parent was "Do you buy magazines especially for the child". As before, this variable had a negative weighting, implying that children who have a higher level of developmental skills as rated by parents are less likely to be those for whom magazines are specially bought, or conversely.

What this may mean is that parents who buy magazines especially for their children may tend to be those who are more aware of their child's needs and developmental level and so not quite prone to rate these highly. It could also be true that children who receive the kind of special attention implied by having special magazines bought for them may, in fact, be less mature in terms of self-help skills as perceived or fostered by parents. In the absence of case-study, this can only be an interesting speculation.

Both sets of regression analyses confirm that the home-educational measures studied here are independent of major factors such as parental S.E.S. or educational level and the other measures of particular kinds of parental educational activity, parent-child interaction, or expectations for ability, vocational success or developmental level.

CHAPTER 32 – PARENTS' SOCIO-ECONOMIC STATUS AND EDUCATIONAL LEVEL AND TEST SCORES

Although fathers' and mothers' S.E.S. are highly correlated, as are their educational levels, the relationships would still permit the above measures to affect other external measures differently depending on whether the father's or the mother's S.E.S. or educational level is employed.

The following analysis brings this out more clearly.

The mother's socio-economic status and educational level were correlated with test scores.

In this junior kindergarten group, there were no significant relationships between mother's S.E.S. and any test score; there were significant correlations (at the .01 to .05 level of probability) between mother's education level, and vocabulary and expressive language.

On the other hand, the father's socio-economic status was significantly correlated with: vocabulary, copying geometric shapes, expressive language, spelling, reading, math, gross motor skills and the grand total of test scores. Significance was at the .03 to .001 level of probability for these correlations, though in a cruder analysis using cross-tabulation, the chi-square probability had not been significant except in two cases out of the 9.

Father's educational level is significantly correlated with: vocabulary, copying geometric shapes, expressive language, spelling, reading, math but not with grand total of tests or with gross or fine motor skills.

Thus father's educational level is less strongly or comprehensively associated with performance at the junior kindergarten level than is his socio-economic status. This is the converse of the pattern of relationships between the young child's performance and mother's status.

341

The picture is very different for the senior kindergarten group.

Mother's socio-economic status correlated significantly with: vocabulary, expressive language, reading, math and grand total of tests with significance levels at .001 to .015 probability.

Mother's educational levels correlated significantly with: vocabulary, copying geometric shapes, expressive language, spelling, reading, math and grand total of tests, at significance levels of .001 to .012. The correlation with gross motor skills was on the borderline of significance (probability .052).

It can be seen that educational level correlated with more test performances than did socio-economic level. The two additional tests with which educational level was correlated were copying geometric shapes and spelling.

Father's socio-economic status correlated significantly with all tests, at the senior kindergarten level, with significance levels at the .001 to .05 levels of probability.

However, father's educational level correlated with vocabulary, drawing geometric shapes, expressive language, spelling, math, gross motor skills and grand total of tests, but not with reading and fine-motor skills.

These are most interesting findings. They confirm that the relationship between important "status" variables such as parental socio-economic level and educational level may vary depending on the particular situation or measure being studied. There will be effects depending on (1) whether the father's or mother's status is the measure; (2) the age of the child; and (3) possibly specific variables.

In particular, it looks as if there is a weaker relationship between test performance and S.E.S./educational measures at the junior kindergarten level if both parents are taken into account. The relationship is particularly weak with mother's status and stronger with father's status. This is puzzling. One might have expected the influence of mother's status to be, if anything, greater on the 4-year-old child and certainly equivalent to that of the father. It looks as if gross effects of differences in the home are mediated through the father's socio-economic and educational status.

There is a hint that mother's educational level is more important at this stage than is her socio-economic status; this would be expected, since the educational level of the mother, her perceptions, values and attitudes to education would be expected to be more closely related to her own "educational" aims and practices within the home than a gross occupational level. However, the relationship is very weak with most test performances.

By contrast, the father's occupational status is a little more important than his educational level in affecting the child's performance at this stage. It looks as if the factors mediated directly by the father's occupational level, e.g. economic level of the household, type of neighbourhood chosen, level of dwelling, facilities available, access to opportunities such as trips, holidays, etc. are the ones which directly affect the child's performance, as contrasted with the father's educational level, which is something in the past and not directly related to present affluence or opportunities.

By the senior kindergarten stage, however, there is a much more significant or far-reaching total effect of socio-economic status and educational level of both parents. It has been noted in previous long-term studies of cohorts of children that the effects of social class or socio-economic status are not apparent in the performance or development of the child in the first pre-school years, up to about 3 - 4 years of age, and then begin to emerge more strongly and explicitly.

Since the effect of parental education, attitudes to education, ways of parenting and teaching the child obviously affect the child from the beginning, it looks as if some of the more gross measures are "sleepers" i.e. have effects which may be cumulative and do not emerge explicitly until a later stage.

These findings should create caution in generalizing about the effects of social variables such as S.E.S. and parental educational level on children's performance and learning. They are consistent with the finding of Shipman, in follow-up studies of large groups of Head Start children in the U.S.A., that the factors affecting the child are to be found in the child, in the home and in the school and that their relationships and effects can only be fully understood by realizing that these factors are complex and interact on one another.

32.1.0 The Effects of Controlling for Father's or Mother's Socio-economic Status and Educational Level

In view of the evidence that there are different effects of parental socio-economic status/educational level as between junior and senior kindergarten groups, and the finding that father's socio-economic level appeared to have the greatest effect at both levels, especially at senior kindergarten level, the question arises: which measure of status - father's or mother's - tends to control or take priority?

To attempt to answer this, a partial correlation technique was used to partial out or control for the effect of father's S.E.S., or educational level, or both together, in an attempt to assess the relationships between father's S.E.S. or educational level and test performance. This was done for junior kindergarten, then senior kindergarten.

For the junior kindergarten age group, the mean correlation between father or S.E.S. and test performance was .3422 (range from .4568 to

.0943); this is a very substantial and statistically significant relationship. The mean probability level of significance of the correlation coefficients is .0415, ranging from .001 to .287, i.e. an acceptable mean level of significance, with some very high levels of significance. Eight out of ten correlations were significant.

When controlled for mother's S.E.S., mother's educational level or for both together, there was practically no change in the correlation between father's S.E.S. and test performance. They are as follows; when controlled: mother's S.E.S. .3422 (probability .0560); for mother's educational level .3679 (probability .0501) and for both together .3472 (probability .0559). It can be concluded that the very powerful effects of father's S.E.S. are not in any way affected by controlling for mother's status at the junior kindergarten level.

The father's educational level has very much lower relationships with test performance. The mean correlation is .1883 (range from .3467 to .078) with a significance which has a mean probability level of .1494 (range from .01 to .474) i.e. the relationships are in general not significant. In fact, only three out of 10 tests are significantly related to father's educational level.

Since the original relationships are non-significant, controlling for mother's S.E.S. and educational level will not be expected to have any marked effect. This is so. Changes in correlation coefficients are in the range .02 to .002, and changes in probability in the range .01 - .02 i.e. minute and random.

Thus, the father's educational level has, in general, little relationship with the child's test performance at junior kindergarten level, and controlling for mother's status has no negative or positive effect, since the mother's status also has no relationship on the whole with the child's test performance.

When the converse pattern (controlling for the father's status) is analyzed, it is confirmed that there is *no* significant relationship between the mother's S.E.S. and child's test performance (mean correlation .961, range from .2685 to .1434; and mean probability .2285, range from .065 to .424).

Therefore, removal of the effect of father's S.E.S., educational level or both will have no marked effect. In fact, the effect of controlling mother's S.E.S. for father's is to lower the correlation from just positive to just negative (.0961 to .0823) and to make the relationship *less* significant (probability .2285 to .3087) .

Similar effects are found for mother's educational level. Mean correlation between mother's educational level and test performance is .0509, range from .3439 to .1834; the mean probability of this relationship is .2365, range from .01 to .437. This means that there is no significant relationship in general between mother's educational level and child's test performance at junior kindergarten level, even though two tests, vocabulary and expressive language, are significantly related to mother's educational level.

The mean correlation between mother's educational level fell slightly when controlled for by either father's S.E.S. or father's educational level, going from slightly positive to slightly negative (from -.0509 to -.1382, -.0537 and -.1114 respectively). However, for this reason, the significance levels tended to increase from .2365 to .1103, .1191 and .0915 respectively. This result suggests that father's status measures *over-controlled*, if anything.

The general conclusion is that father's S.E.S. is the most important variable, and that it controls or pre-empts mother's S.E.S. or educational level.

Similar analyses were conducted for the senior kindergarten group in which, it may be recalled, there were many significant relationships between both father's and mother's status, and test performance.

First, the relationship of father's status with test performance of child were analyzed when controlled for mother's S.E.S. educational level or both.

The mean correlation between father's S.E.S. tests is .2660, range from .3924 to .161. This is significant at a mean level of .0138 level of probability, range from .001 to .135.

The over-all relationship is therefore moderate but significant.

When this relationship is controlled for the effect of mother's S.E.S., it falls below significance i.e. mother's S.E.S. is an important controlling variable and has effectively removed or reduced the relationship of father's status to tests. In detail, the mean correlation falls to .663, and significance level to .1127.

A similar pattern emerges when mother's educational level is controlled or partialled out. The mean correlation between father's S.E.S. and test performance now falls to .1585 and significance drops to .0908. If anything, the result of the removal of the effect of mother's educational level from the relationship of father's status to tests is slightly larger than that due to mother's S.E.S.

Controlling for the joint effect of mother's S.E.S. and educational level led to a slight further decrease in the relationship of father's status and tests. The mean correlation dropped to .1379 and significance dropped to .1393.

Either mother's socio-economic status or her educational level or both together therefore had a marked effect in decreasing the relationship of father's status with test performance. Mother's S.E.S./ educational levels are therefore significantly correlated with father's status but can also operate effectively in their own right.

A closely similar result is found for the effect of control of mother's status on the relationship between father's educational and test performance. This time, however, mother's S.E.S. seems to be slightly stronger in its effects. In detail, the mean correlation of the father's educational level and test performance is .2241, range .3733 to .1064; significance level is .0462, range from .001 to .135. As with socio-economic status, the relationship is moderate but significant.

With mother's S.E.S. controlled, relationship of father's educational level and tests falls to a mean correlation of .1360, and significance falls to .1583 i.e. effectively a non-significant relationship. When mother's educational level is controlled, the mean residual correlation between father's educational level and test performance falls to .111 and significance level to .120 i.e. non-significance. When both S.E.S and educational level of mother are controlled, there is a further slight decrease in the relationships between father's educational level and test performance (a drop to a mean correlation .1379 and significance drops further to .1393).

These results also suggest that mother's S.E.S. or educational level are equally powerful in their controlling effect.

Mother's S.E.S./educational levels are therefore significantly correlated with father's status but can operate effectively in their own right.

Summarizing this section: it appears that mother's status variables have much the same power as father's status variables; controlling for the effect of mother's S.E.S. or educational level has much the same effect, in reducing the previous direct relationship between father's S.E.S. or educational level and test performance to non-significant levels.

The final analysis examined the effect of mother's status variables and their relationship with test performance.

The mean correlation between mother's S.E.S. and child's test performance is .2340, range from .3583 to .1005; the mean significance level of the correlations is .0525, range from .001 to .183. There are six significant correlations between specific tests and mother's S.E.S. In general, the relationship is moderate and significant and similar to that for the father.

When father's S.E.S. is controlled to analyze the effect of mother's S.E.S. with test performance, the mean correlation drops to .1034; .1757 significance, and much the same occurs when both father's S.E.S. and educational level are used as controls (mean correlation of mother's S.E.S. with test performance drops to .1031, significance to .1801).

The effect of controlling for father's educational level is similar but slightly less marked. The mean correlation of mother's S.E.S. with test performance drops to .1523,significance to .1316.

It is evident, therefore, that father's S.E.S. or educational level, or both jointly, have a marked effect in reducing the relationship of mother's S.E.S. with test performance below a significant level.

The mean correlation between mother's educational level and test performance is .2398, range from .3748 to .0236, and mean significance level .0517, range from .001 to .404.

As with mother's S.E.S., the relationship is moderate but significant.

When father's S.E.S. is used to control the relationship between mother's educational level and test performance, the correlation falls to .1147 and significance falls to .1390. There is a less marked but still significant effect when father's educational level is used as control: the mean correlation between mother's educational level and test performance drops to .1417, and significance drops to .1316. The joint effect of father's S.E.S. and educational level on the relationship between mother's educational level and test performance is only slightly more than for father's S.E.S. alone. The mean correlation of mother's educational level and test performance drops to .1022 and significance level drops to .1549.

It can be concluded that father's S.E.S. or educational level or both jointly have a marked effect in reducing the relationship of mother's educational level with test performance below a significant level. The evidence available suggests that the father's S.E.S. is slightly the more powerful factor, even though comparisons are being made with educational level.

To sum up all the results: mother's status variables (S.E.S. and educational level) have moderate but significant relationships with children's test performance; these status relationships can control the relationship of father's status (S.E.S. and educational level) with test performance. This indicates two conclusions (1) that mother's and father's status variables are significantly and highly correlated but that (2) each can operate powerfully and independently.

Similarly and conversely, father's status variables have moderate but significant relationships (rather more than for mother's) with children's test performance; these status relationships, especially father's S.E.S., can control the relationship of mother's status (S.E.S. and educational level) to children's test performance.

The above two conclusions also hold.

In this sense, it does not matter whether mother's or father's S.E.S. and/or educational status are used to predict the relationship with the child's test performance. It also means that all four variables (S.E.S. educational level, for father and for mother) could be used jointly in a total "score" to ensure a more stable and reliable, and probably slightly more valid method of scoring for the gross social economic variables in the family.

32.2.0 Conclusions

The situation for the senior kindergarten group is quite different from that for the junior kindergarten group, where it was quite clear that father's socio-economic status was the only important measure. The questions and speculations raised by this have already been referred to. As a matter of practical concern, for the future study, it would appear that socio-economic status and educational level of parents (especially of mother) is not a significant variable in test performance. This could be of practical consequence in considering the outcomes of early screening and identification of children as having special needs at the junior kindergarten level.

Clearly, this finding should be further checked.

32.3.0 The Interactions of Parental Socio-economic/educational level Variables and Child's Test Performance

As discussed, there are low but significant relationships between father's and mother's socio-economic and educational level and a number of test performances of the child at the senior kindergarten level. There are restricted and often non-significant relationships between parental status variables, especially the mother's socio-economic status, and child's test performance at the junior kindergarten level.

The possible inter-relationship between mother's and father's socio-economic status and educational level has already been discussed. It has been shown that, at the senior kindergarten level, these variables are closely related, i.e. father's with mother's status; socio-economic status appears to be the most independent factor in a highly inter-correlated cluster.

Multiple regression analyses of the contribution of mother's socio-economic status or educational level or their joint effect, to father's socio-economic status, educationallevel or their joint effect on test performance were conducted. This showed that, at the junior kindergarten level, father's socio-economic status was practically the only important status variable affecting test performance and that this was a weak effect. At the senior kindergarten level, removal of the effect of mother's status variables reduced the effect of father's status variables on test performance below a significant level, and conversely for the effect of father's status variables in controlling the mother's. The socio-economic status variables were slightly the most significant and important, in their effect.

These previous analyses describe the predictive value of parental status variables for father and for mother separately, i.e. the predictive value of socio-economic status for each parent, and educational level of each parent, and the joint effect for each parent.

It was noted that the joint effect did not raise the significance of prediction a great deal as compared with the single contribution of socio-economic status.

As a result of previous multiple regression analyses of the contribution of parental status variables to predicting children's test performance, it was decided to investigate in what way the interaction between parents' status variables operated i.e. the joint effect of father's and mother's contribution after eliminating what was due to each separately.

This was computed for:

"Mother 3": interaction of mother's and father's socio-economic status; "Mother 4": interaction of mother's and father's educational level; "Father 3" : Mother's socio-economic status and Father's educational level;

"Father"4: Mother's educational level and father's socio-economic status; and the final constructed variable, "Total" the interaction of both socio-economic status and educational level for both parents.

For the junior kindergarten group, relationships between these constructed status variable and test performance remain low.

Significant first-order correlations are found between vocabulary and the M3, M4 and F3 variable, and of borderline significance for F4 and Total. There was one significant correlation between drawing shapes and F3; and correlations of borderline significance with spelling for M3 and F3. There were no significant relationships with grand total of tests.

It was noted, in the multiple regression analyses, that the parental interaction variables were not behaving as if statistically independent but formed composites which approached very high multiple correlations, including some near unity.

This made obvious nonsense; the effect of conducting a multiple regression analysis on interaction variables is obviously to cause them to predict themselves, in effect. Discussion is therefore limited to the first order correlation of single interaction variables with test.

In the senior kindergarten group, the significant first order correlations are limited to vocabulary, math and grand total of tests, with less significant correlations with receptive and expressive language. The relationships with the test of drawing geometric shapes are - two clearly significant correlations, with M4 and F4 and correlations of borderline significance with the other interaction variables.

It was noteworthy that there was practically no significant relationship with the test of naming colours, with attainment tests of spelling and reading, and markedly low and insignificant correlation with the gross and fine motor tests.

The raw averages for test/interaction correlations across all tests, including grand total of tests, are as follows:

M3 (Mother's and father's S.E.S. interaction)	.2676
F4 (Father's S.E.S. with Mother's education)	.2589
F3 (Mother's S.E.S. with Father's education)	.2278
M4 (Mother's education with Father's education)	.2243
Total	.1844

Even if grand total (which has high correlations) is omitted, the above values remain very similar and in the same rank order. There is very little difference between the different variables, but it looks as if the interaction due to Mother's and Father's socio-economic status is the most predictive, followed by the variable in which the effect is due to Father's socio-economic status shared with Mother's education.

It can be seen that the effect of pooling the total interaction is far less predictive. Clearly there are interactions within the total group of variables which cancel one another out, or act as unwanted suppressor variables.

The highest correlations between the interaction variables and test performances such as vocabulary and math are in fact very significant (as such variables go),in the region of .35/36, which approximates the correlation between some of the tests themselves.

It can be concluded that there are some important joint and/or interaction effects in parental status variables, so that both parents' socio-economic status, or both socio-economic status of father and educational level of mother are important, in relating these variables to educational measures.

CHAPTER 33 – ASSOCIATIONS BETWEEN HOME-EDUCATIONAL MEASURES, TEST PERFORMANCE AND TEACHERS' RATING OF LANGUAGE

Previous studies (e.g. Plowden 1967) have demonstrated that, apart from the effects of gross measures such as parental socio-economic status, there are subtler measures which may affect parental education, attitudes to education and ways of stimulating children.

It was shown in the previous chapter that some of these subtler or more immediate measures either remain when the gross effects of parental socio-economic level and/or education are removed, or may be independent of these latter variables. (e.g. reading to child, amount of time child is allowed to view TV)

Cross tabulations were performed between some of these variables and test performance, for the senior kindergarten group.

33.1.0 Family's Membership of Public Library and Test Performance:

For the senior kindergarten group, the family's membership of a public library was cross-tabulated with the child's test performance. There were significant correlations: with vocabulary (correlation, probability .01), reading (correlation, probability .02), math (correlation probability .01 and chi square probability .01), expressive language (correlation, probability .02, chi square probability .015), receptive language (correlation, probability .04), and grand total of tests (correlation, probability .007). Correlation coefficients are low, in the region of .19 to .23. Nevertheless, there is a consistent and significant relationship between the family's membership of a public library and the child's test performance in school.

33.2.0 Family's membership of Public Library and Teachers' Ratings of Language:

The "always" uses category, "sometimes" category and the "never uses" category of the teachers ratings on the child's language checklists were counted. The cross tabulation was done between these counts and the family's membership in public library. It was expected, for example, that there would be a high correlation with a large number of responses in the"always"category and membership library or a large number of responses in the "never" category and no membership in the public library.

The association between family membership of library and the teachers' ratings of the child's language were not quite significant for the "always uses" category (correlation, probability .053) but significant for the "never uses" category (correlation, probability .03). This finding confirms that there is a relationship between the child's mastery of spoken language as rated by the teacher and the family's use of a library.

33.3.0 Does the Parent Actually Use the Library, and Test Performance:

When, however, the relationship between the parent's actual use of the library (rather than just membership by the family) and child's test performance was examined, the relationship rose to much higher and more significant levels.

They were as follows: expressive language (correlation significant at .001 level, chi square at .006 level); vocabulary (correlation significant at .0001 level, chi square at .0007 level); reading (correlation significant at .02 level), math (significant at .03 level); grand total of tests (correlation significant at .003 level). The abilities most directly dependent on home and environment (expressive language and vocabulary) are those most directly related to whether or not the parent goes to the library. Correlation coefficients for these two test performances were .33 and .445 respectively - higher than those observed for the correlation between parental socio-economic status or educational level and child's test performance. Relationships for test performance associated directly with school (reading, spelling) were lower.

33.4.0 Actual use of Library and Teachers' Rating of Child's Language:

There was a significant relationship between actual use of library and the "never uses" category of the teachers' rating of child's language skills (correlation significant at .01 level) but not with the other two categories, "always uses" and "sometimes uses".

The correlation coefficient was, once again, quite high - .344.

33.5.0 Mother's Liking for Reading and Child's Test Performance:

The question whether mother likes to read or not was cross-tabulated with the child's test performance. The only significant relationship was with a composite of scores on gross and fine motor skills. (Correlation significant at .03 level). Otherwise, there are no significant relationships.

33.6.0 Mother's liking for Reading and Teacher's rating of Child's Language:

On the other hand, there are significant relationships with the teachers' ratings of the child's language. For the category "always uses" chi square probability was .04, and for the category "never uses", the correlation was significant at .04 level.

In general, therefore, it can be concluded that there is no consistently significant relationship between child's test performance and whether mother likes to read. One reason for this is that most mothers claimed that they liked to read, so that there is no basis for discrimination between groups.

33.7.0 Father's liking for Reading and Child's Test Performance

The only significant relationship with father's liking for reading was with the composite of gross and fine motor skills, significant at .02 level (chi square). As with mother 's reading, there is no consistent significant relationship.

33.8.0 Father's liking for Reading and Teachers's Language Rating

Similarly, there was no significant relationship between father's reading and teachers' ratings of the child's language performance.

33.9.0 Reading to the Child and Test Performance

Finding opportunity to read to the child is significantly related (correlation coefficient, significance .019) with expressive language.

33.10.0 Language other than English/French Spoken in Home and Test Performance

There was no significant relationship between the degree to which a language other than English or French is spoken in the home and the child's test performance, or with teachers' ratings of the child's language performance.

33.11.0 Family's Newspaper Usage and Test Performance

There were three significant associations between a family's purchase and presumed readership of newspapers (e.g. daily, weekly) and the child's reading (chi square significant at probability level .04), math (chi square significant at probability level .0064) and the grand total (chi square significant at probability level 0.0002)

Otherwise, associations with test performance by the child were non-significant.

33.12.0 Family's newspaper usage and Teachers' Language Rating

There were no significant relationships between family newspaper readership and the teachers' ratings of language.

In the junior kindergarten group the following were observed:

33.13.0 Membership of Library (family, one parent or other, children) and Test Performance

There was no significant relationship between degree of membership by family in a public library and expressive or receptive language.

33.14.0 Does Parent Actually go to library? and Test Performance

There was no significant relationship between the mother going to a public library and the child's performance in expressive language, receptive language, vocabulary, reading, math, gross motor skills, fine motor skills or grand total of test, but there was a significant relationship with spelling (chi square significance .05).

33.15.0 Does mother like to read? and Test Performance:

This is the measure explored above, for senior kindergarten children. There was no significant relationship with most test performances, with the exception of spelling (correlation coefficient significant at .04 level), gross motor skills (correlation coefficient significant at .05 level) and fine motor skills (correlation coefficient significant at .05 level).

33.16.0 Father's liking for Reading and Test Performance:

There is no significant relationship between father's liking for reading/reading habits and child's test performance at junior kindergarten level.

33.17.0 Use of Language Other than English/French in the Home and Test Performance:

Apart from a solitary significant association, between receptive language and use of a language other than English/French, (chi square, probability .03, correlation probability .05) and a borderline significant association with grand total, there are no consistent and significant associations between children's test performance and the degree to which a language other than English is used in the home. This confirms that bilingualism in the home does not have any major effect on school performance.

33.18.0 Use of Language other than English in the Home and Teachers' Ratings of Language

There was, however, a significant correlation between the teachers' ratings of the child's language levels (discussed in a previous chapter) when the category "always uses" the item was examined (correlation, probability .04). There was no significant relationship with categories "sometimes uses" and "never uses".

33.19.0 Family Newspaper Readership and Child's Test Performance:

There are two significant relationships between family's purchase of newspapers(and so presumably readership) and children's test performance. They are reading and math, (correlation significance at .04 probability). There were no significant relationships between teachers' ratings of children's language performance.

33.20.0 Number of Places Visited and Vocabulary Test :

For the junior kindergarten group, there was no relationship between the number of places visited (trips, etc. by family to places of general, educational or cultural interest) as described in Part 1 of the report and the child's tested vocabulary.

33.21.0 Number of Places Visited and Evening Television:

There was a significant correlation (probability .01) with the amount of time spent in watching evening television. The correlation coefficient was -.35, i.e. the more the variety of educational trips, the less time spent on evening television by the child and conversely.

However, for the senior kindergarten group, there was no significant relationship between number of trips and vocabulary or amount of time spent watching evening television.

In general, there are low or insignificant relationships between the child's test performance and factors such as family's newspaper readership, or mother's and father's preference for reading which are common to all families and are rather general cultural factors, "distant" from direct effects on the child.

Factors which involve direct commitment by parent to cultural literacy pursuits such as membership of a library and, in particular, direct personal commitment to an educational experience such as using a library have, on the other hand, significant and remarkably high relationships with the child's test performance. The correlations are higher than those for parental socio-economic status or educational level, which are important gross factors but related to the child's performance only in complicated and indirect ways. The parental literacy/interest in education factors, on the other hand, have a stronger and more direct influence on the child. This confirms in general the findings of studies such as Plowden, that the more immediate factors of parental attitude and interest have effects over and above those of the gross parental social and educational factors.

Factors such as: spending time with the child, reading to the child and buying special magazines for the child, proved to have disappointingly low or insignificant relationships with one another and other factors such as time spent by child watching television, parental estimates of child's ability level and expectations of future vocational success.

Nevertheless, it appeared possible that these obvious "educational" factors might be related to the child's test performance. Multiple regression analyses were therefore conducted to find how the above factors separately and jointly predicted children's test performance.

In the junior kindergarten group, "buying magazines especially for the child" had a significant relationship with the vocabulary score.

Adding the factor - "parent reads to child" raised the multiple correlation only slightly. The multiple correlation was .418 and the weight attached to "buying magazines" .44; other variables had low weights.

There was a low significant relationship between "buying magazines" or any other variable with fine motor performance. Multiple correlation was .326, and weighting for "buying magazines" .24, as compared with .22 for "often reads to child".

There was no significant relationship between "buying magazines" and expressive language. The multiple correlation was .424 to .436 and weighting of the "magazine" variable was .44 to .45.

"Buying magazines" also had the highest significant relationship with spelling. "Buying magazines" was the main contributor to the prediction, a remarkably high multiple correlation coefficient of .596, but the variable "spends time with child" added a significant amount to prediction. The weights for "buying magazines" and "finds time to be with child" were .52 and .24 respectively; the other weights were insignificant.

"Buying magazines" also had a highly significant relationship with reading, a multiple correlation of .46 and weight of .40 in one equation, and a multiple correlation of .44 and weight of .42 in another.

There were no significant relationships between any of the variables and math performance, fine-motor or gross-motor skills or grand total of tests.

In summary, the major predictor was "buying magazines for child" with significant contribution of "spending time with child" to spelling performance, but only slight additional contributions by this variable and by "reading to the child" to most test performance.

It is unexpected, and in a sense disappointing to find that a likely variable such as "reading to the child" has such insignificant relationships with the child's test performance.

In the senior kindergarten group, the majority of relationships were non-significant. The pattern was quite different from that for junior kindergarten. The only significant relationships were as follows: they were between "time spent with child", which had a borderline significant relationship with vocabulary (multiple correlation of .30), but with a low weighting of .16 for "time spent with child" as contrasted with "reading to child often", weight .29 and occasionally, .20.

Analysis of "naming colours"and "time spent with child", gave a low multiple correlation of .276, and a weighting of .24 as contrasted with .15 to - .15 with the other variables.

The third significant relationship was between "buying magazines for the child" and receptive language. This equation gave a multiple correlation of only .212, with a weight of . 193.

In all the equations, "reading to the child" made no significant separate contribution and added slight amounts to prediction.

In general, these variables related to parental interest and concern for the child had disappointing relationships with the child's actual test performance.

33.22.0 Relationship of Test Performance to Other Variables: Neighbourhood, dwelling, environment, sex, age of parents

33.22.1 Type of neighbourhood

Cross-tabulations were made between the type of neighbourhood from which the children were sampled: urban, suburban, small town, rural with and without neighbours.

There were few significant associations. These were, with fine-motor skill, (chi square, significance .02) spelling (correlation significant at .05) and child's ability to use/save money (chi square significant at .05 level). The correlation with spelling was negative.

33.22.2 Dwelling Environment

This question related to whether the immediate neighbourhood was judged by parents to contain mainly young people, to be composed of mixed ages or older. There was a significant relationship (chi square .04) with grand total of tests.

33.22.3 Age of mother

This had no significant relationship to any test performance by child.

33.22.4 Number of Children in Family

The two significant relationships were with expressive language (chi square probability .033); .003 level. The relationship between level of expressive language and number of children in family is negative, as would be expected, but is highly positive with level of fine-motor skill.

It is puzzling to find such limited relationships between number of children in family and test measures; previous studies have suggested a significant negative relationship between test performance (including I.Q. measures) and size of family. Size of family has also been observed to have a negative association with socio-economic status.

The negative associations of large family size and school or test performance may be due to direct socio-economic effects i.e. the effect of less affluence or poorer or more crowded living conditions in reducing access to educational resources; or it may be due to the fact that in a larger family there is less opportunity for intensive, personal attention and stimulation for the individual child.

However this may be, strong effects did not emerge here. This may be because only a relatively small proportion of the sample were from families of more than 2 to 3 children.

It is of interest that there is a negative relationship with expressive language level - to be expected if there is less opportunity and stimulation, but a very strong positive relationship with level of fine-motor skills, which leads to the speculation that such skills are fostered in large families, possibly by children teaching or playing with one another.

33.22.5 Father's age

Father's age, unexpectedly, had a significant relationship with expressive language level (chi square probability .04), in a positive direction, and also a significant association with grand total of tests (chi square probability .03, correlation significant at .03 level).

The older the father, the better the child's performance. This finding may possibly be explained by the fact that, the older the father, the higher the socio-economic level would tend to be, all other things being equal.

33.22.6 Sex of child

There were no significant differences in test performance between boys and girls.

CHAPTER 34 – THE TEMPERAMENT RATINGS AND THEIR ASSOCIATIONS

The nine temperament rating scales are described and score distributions for parents and for teachers analyzed in an earlier section.

34.1.0 Relationship between Parents' and Teachers' Temperament Ratings (In the senior kindergarten group)

There was a significant relationship (chi square probability .05, correlation probability .0001) between the parents' and teachers' ratings of children on activity level. The correlation coefficient was .396, which is low to moderate.

There was a significant but low relationship (correlation, probability .04) between parents' and teachers' ratings of approach-withdrawal. The correlation coefficient was only .19. There was a significant but low relationship (correlation, probability .05) between parents' and teachers' ratings of adaptability. The correlation coefficient was only .186.

There was a significant relationship between parents' and teachers' ratings of adaptability. The correlation coefficient was only .186.

There was a significant relationship between parents' and teachers' ratings (chi square probability .4, correlation probability .0001) of persistence. The correlation coefficient was .400, low to moderate.

There was no significant association between teachers' and parents' ratings on the other five temperament scales.

Parents' and teachers' ratings of the child's temperament therefore have some relationship, but these tend to be very low. In effect, only two temperament scales, activity level and persistence show any convincing correlation.

Obviously parents and teachers are interpreting or using the ratings scales differently, or they are basing their observations on different aspects of the child's behaviour or environment.

This is an example of the "Isle of Wight Study" effect. In that study, carried out by Rutter, Tizard and Kingsmore on the complete school population at age 9 and 11 years of age in an English county, parents and teachers were asked to complete an almost identical check-list relating to the child's emotional/behavioural adjustment.

Children classified by parents as disturbed or maladjusted were not the same children classified by teachers as maladjusted. The overlap between the groups was only 20 percent. Nevertheless, the authors of the study concluded from their evidence that both sources were validly identifying children with behavioural or emotional difficulties, but on different grounds and in different contexts. Their conclusion was that both sources of information should be taken into account.

34.1.1 In the junior kindergarten group, there were significant relationships between parents' and teachers' ratings of temperament for: activity level (p. 02), approach-withdrawal (p. 05), adaptability (p. .91) insensitivity of reaction (p. 001 - .02), distractibility (p. 001) and attention span (p. .001). In other words there is a rather high relationship between parents' and teachers' ratings of temperament for the younger age group (which makes relatively good sense).

34.2.0 On the following pages are tables showing the relationships between temperament ratings (teachers) and test scores in the senior kindergarten group.

34.2.1 Intensity of reaction: these are consistently significant
Scoring (very intense ...... 5 not so intense) relationship

Test Items	Chi Square Probability	Correlation Probability	Correlation Coefficient
Expressive language	-	.02	-.180
Spelling	.0006	.0002	-.309
Reading	.05	.0083	-.207
Math		.0005	-.280
Gross motor	-	.036	-.161
Fine motor	-	.006	-.221
Grand total	.0002	.0001	-.356

34.2.2 Adaptability: these are significant, high relationships
Scoring: (1 v. adaptable ....5 not very adaptable)

Expressive language	.008	.0003	-.293
Vocabulary	-	.03	-.22
Receptive language	-	.0002	-.301
Spelling	.003	.0001	-.368
Reading	.04	.0005	-.279
Math	.007	.0001	-.379
Gross motor	-	.013	-.196
Fine motor	-	.0001	-.322
Grand total	.01	.0001	-.429

34.2.3 Approach-withdrawal - high level of significant association

Scoring (1 very approachable ..... 5 withdraws)

Test items	Chi Square Probability	Correlation Probability	Correlation Coefficient
Vocabulary	.017	.013	- .269
Receptive Language	.0001	.0001	- .368
Expressive Language	.001	.00001	- .344
Spelling	.003	.0001	- .401
Reading	-	.0001	- .316
Math	.009	.0001	- .404
Gross motor	.0002	.0001	- .352
Fine motor	.011	.0001	- .327
Grand total	.002	.0002	- .463

34.2.4 Threshold of Responsiveness

Test items	Chi Square Probability	Correlation Probability	Correlation Coefficient
Expressive lang.	.01	.0001	- .317
Vocabulary	N.S.	N.S.	N.S.
Receptive lang.	-	.026	-.172
Spelling	-	.002	- .246
Reading	-	.015	- .188
Math	.04	.0001	- .354
Gross motor	.02	.007	- .218
Fine motor	-	.008	- .214
Grand Total	.001	.0001	- .384

34.2.5 Activity level - non-significant relationships except for the following.
Scoring (high activity .... 5 low activity level)

Test items	Chi Square Probability	Correlation Probability	Correlation Coefficient
Vocabulary	-	.05	- .206
Spelling	.02	-	-

34.2.6 Mood quality:
Scoring (1 positive mood .... 5 negative mood)

Test items	X^2 Probability	Correlation Probability	Correlation Coefficient
Expressive language	-	.0001	- .308
Vocabulary	-	.02	- .242
Receptive language	-	.013	- .191
Spelling	.006	.0003	- .294
Reading	.018	.003	- .238
Math	.0007	.0001	- .321
Gross motor	.0001	.00001	- .383
Fine motor	-	.001	- .269
Grand total	.033	.0001	- .317

34.2.7 Distractibility - highly consistent, significant relationship
Scoring (1 v. distractible ....5 non-distractible)

Test items	X^2 probability	Correlation Probability	Correlation Coefficient
Expressive language	.0001	.0001	.400
Receptive language	.05	.004	.227
Spelling	.0001	.0001	.401
Reading	.007	.0001	.337
Math	.01	.0001	.360
Gross motor	.03	.0001	.376
Fine motor	.007	.0001	.354
Grand total	.0001	.0001	.424

34.2.8 Attention and Persistence

Scoring (1 very persistent ..... 5 not persistent)

Test items	X^2 probability	Correlation probability	Correlation coefficient
Expressive language	.0001	.0001	- .543
Vocabulary	-	.019	- .257
Receptive language	.003	.0001	- .372
Spelling	.0001	.0000	- .509
Reading	.0002	.0001	- .361
Math	.0002	.00001	- .396
Gross motor	.04	.001	- .270
Fine motor	.002	.00001	- .437
Grand total	.0001	.00001	- .500

Junior Kindergarten

34.3.0 Intensity of reaction - non-significant relationships, except for receptive language.

Scale (1 very intense .... 5 not very intense)

Test items	X^2 probability	Correlation probability	Correlation coefficient
Receptive language	.054		

34.3.1 Adaptability

Scoring (1 very adaptable .... 5 not very adaptable)

Test items	X^2 probability	Correlation probability	Correlation coefficient
Expressive language	-	.0002	- .452
Vocabulary	-	.03	- .271
Receptive language	.041	.004	- .344
Spelling	-	.003	- .356

Adaptability - Cont'd

Test items	X^2 probability	Correlation probability	Correlation coefficient
Reading	-	.01	- .305
Math	-	.02	- .263
Grant total	-	.007	- .323
Motor tests - non-significant			

34.3.2 Quality of mood: significant relationships

Scale (1 positive mood .... 5 negative mood)

Test items	X^2 probability	Correlation probability	Correlation coefficient
Expressive language	-	.002	- .368
Receptive language	-	.010	- .307
Spelling	-	.02	- .267
Reading	-	.04	- .229
Math	-	.02	- .263
Gross motor	-	.02	- .281
Grand total	-	.011	- .299

34.3.3 Distractibility

Scale (1 very distractible ..... 5 non-distractible)

Test items	X^2 probability	Correlation probability	Correlation coefficient
Expressive language	-	.0003	.441
Vocabulary	-	.0002	.483
Receptive language	.0003	.0001	.462

Distractibility - cont'd

Test items	X^2 probability	Correlation probability	Correlation coefficient
Spelling		.006	.325
Reading	.016	.001	.391
Math	.033	.035	.238
Gross motor	.051	.004	.370
Grand total	.026	.002	.365

34.3.4 Threshold of responsiveness - non-significant, except for the following.
Scale (1 low threshold ....5 high threshold)

Test items	X^2 probability	Correlation probability	Correlation coefficient
Expressive language	-	.04	- .231
Math	-	.02	- .273
Grand total	-	.029	- .254

34.3.5 Activity level - non-significant, except for the following.
Scale (1 high activity .... 5 low activity)

Test items	X^2 probability	Correlation probability	Correlation coefficient
Vocabulary	-	.025	.283
Receptive language	-	.03	.246

34.3.6 Approach withdrawal - significant relationships
Scale (1 very approachable ..... 5 withdraws)

Test items	X^2 probability	Correlation probability	Correlation coefficient
Expressive language	-	.014	- .288
Receptive language	-	.014	- .287
Spelling	-	.03	- .246

Approach-withdrawal - significant relationships cont'd

Test scores	X^2 probability	Correlation probability	Correlation coefficient
Reading	-	.01	- .299
Math	.05	.008	- .313
Gross motor	-	.02	- .288
Grand total	-	.018	- .277

34.3.7 Attention span

Scoring (1 very persistent .... 5 not persistent)

Test scores	X^2 probability	Correlation probability	Correlation coefficient
Expressive	-	.008	- .314
Vocabulary	-	.011	- .323
Receptive	-	.013	- .299
Spelling	.001	.005	- .339
Reading	-	.006	- .327
Math	-	.029	- .248
Grand total	-	.035	- .239

34.4.0 Significance of the results

The findings on the strong relationships between teachers' ratings for children's temperament and test results, especially in the senior kindergarten group, are most interesting and useful. The relationships between several of the ratings and test performance are remarkably high; they are higher than the relationship between factors such as parental socio-economic status or educational level and test performance; they are as high as the relationships between some tests and others.

It can be argued that what the teachers are identifying is not individual differences in "temperament" but reasonably stable personality difference in children interacting with tasks and teacher in the school environment. There is evidence to suggest that ratings such as are used here are basically reflections of "semantic differential" patterns in teachers as used to perceive and classify children. That is, the ratings may reflect more basic dimensions of attribution of "reliability", "effectiveness", "dynamism"or simply being "good/bad" to the teacher. Or, to put the matter slightly differently, the patterns of ratings represent the "construct(s)" evolved by the teacher in observing, comparing and classifying the interaction of children with themselves, others and the environment. However this may be, the constructs are obviously significant (as shown by their consistent relationship with external behaviour such as test performance) and meaningful. They represent the evaluation of children as having consistent interaction patterns labelled persistence, adaptability, good attention, lack of moodiness, relatively low activity, etc., which represent a cluster of behaviours which are either likely to make the child into a "good student" or, which is much the same thing at this level, develop a learning style or strategy which is likely to agree well with classroom requirements and lead to effective learning. Obviously, too, one must be alert to the possibility that the relationships also act in the converse direction i.e. that children who are more competent in test performance,especially language and math, are likely to even develop further the attributes of confidence, persistence, adaptability to task, etc, which is reflected in the "temperament" ratings.

Whatever the reasons, it is clear that the temperament ratings are an excellent additional means of helping to describe and predict children's successful school behaviour, and they would form a useful practical addition to any battery intended to contribute to a "developmental review" or to early identification of children with effective and ineffective learning.

34.5.0 The multiple regression analyses

(The temperament variables were recoded for this analyses so that 1 equals the low end of the scale and 5 equals the high end of the scale)

The highly significant relationships between temperament ratios and test performance are further analyzed and confirmed by multiple regression analyses.

A set of temperament variables: adaptability, activity level, distractibility and attention span/persistence, were selected from the complete set. They were intercorrelated and regression analyses conducted to establish which variables contributed most to given kinds of test performance and what the effect of joint contribution would be.

In general, the relationships between the joint variables and test performance are significant. However, there is a distinct difference between the outcomes for junior kindergarten and senior kindergarten groups.

34.5.1 In the junior kindergarten group, the following patterns were observed.

The math test was not significantly predicted by any combination of temperament ratings.

Distractibility was the only significant predicter of gross motor performance, with a multiple correlation of .483, and beta weight of .64, slightly improved by the addition of adaptability and activity ratings. Both "attention span" (or its reverse) and activity level have negative weighting, indicating that they serve best as "suppressor" variables.

Adaptability and activity do not add any significant prediction on their own, apart from distractibility.

There are no significant predictors of fine motor performance.

Distractibility, adaptability and attention span contribute to the grand test total, each adding something specific. The multiple correlation is in the region of .455 with the best choice and sequence of temperament ratings as predictors.

Activity level appears with a negative weighting as a rule and does not have significant direct relationships with test performance, so it is obviously acting as a useful "suppressor variable" i.e. when other predictors have made their contribution, a negative weight on activity (i.e. lower activity level) adds a little more to the total prediction.

Distractibility recurs as the best predictor for vocabulary, though attention span and adaptability can contribute. If distractibility is entered first into the equation, it usually accounts for most of the variation. A multiple correlation of about .54 can be obtained with the best set of predictors.

Activity level is again a "suppressor variable", with negative weighting.

None of the temperament scales significantly predicts copying of geometric shapes.

Distractibility is the leading predictor of receptive language, but with significant contributions from adaptability (most) and attention span/persistence (least). Multiple correlations in the region of .577 can be obtained.

Adaptability is the best predictor of expressive language, with contribution from distractibility and attention span.

Multiple correlations with test score of .569 can be obtained. Activity level is negatively weighted, and is a suppressor variable. Where adaptability and distractibility occur in the same equation, they tend to have roughly equal weights.

Attention span/persistence is the best predictor of spelling; and if put in the leading position with the three other temperament variables following produces a multiple correlation of .527 with test score. However, adaptability has a roughly equal weight; activity level is again a suppressor variable.

Distractibility and adaptability together, without attention span make a significant joint contribution. The multiple correlation is, however, less than the optimum, at .494.

Attention span/persistence is the best predictor of reading, also, with all other variables, it produces a multiple correlation of .474. However, distractibility runs it close in effectiveness; with other variables, excluding attention span, distractibility produces a multiple correlation of .468.

34.5.2 The Multiple Regression Equations for the Senior Kindergarten Group

The significance levels for the senior kindergarten group in prediction of test performance from the temperament ratings are very much higher and more stable than for the junior kindergarten group.

This may reflect actual differences in the characteristics of the two age groups viz. that there is more stability of test performance and/or of temperamental pattern in the older age group. Functions, in other words, are better established, more highly reinforced or more closely interlinked with other functions. That is, there has been an integration of functions - abilities during the year from 4 plus to 5 plus years of age.

Attention span and persistence and adaptability very significantly contribute to predicting math performance, but distractibility and adaptability form an equally valid team of predictors. Both sets produce a multiple correlation of .49 to .47, almost identical. Activity level does not correlate significantly on its own, but acts as a suppressor variable with a negative weight.

Gross motor activity can also be predicted best by either attention span or distractibility in the equation, giving a multiple correlation of .38.

Fine motor skills are best predicted by attention span and persistence (multiple correlation .47) or by distractibility with adaptability (multiple correlation .41).

Activity level is a suppressor variable with a negative weighting.

Grand total of tests is best predicted by Attention Span and Adaptability (multiple, correlation of .567) or Distractibility and Adaptability (multiple correlation of .532). Activity level is a suppressor variable.

Vocabulary is best predicted by Attention Span (multiple correlation of .375, with little contribution from other variables).

Copying geometric shapes is best predicted by Attention Span and Persistence (multiple correlation .409, with slight contribution from Distractibility).

Receptive language is best predicted by Attention Span, with a contribution from Adaptability (multiple correlation .424).

Expressive language is best predicted by Attention Span, with slight contribution from Distractibility; entering the equation of .51.

Spelling is best predicted by Attention Span and Persistence and Adaptability, which with the other two variables gives a multiple correlation of .54. Distractibility runs this combination a close second, however, in a set of variables containing also activity level and adaptability, giving a multiple correlation of .49.

Reading is best predicted by Attention Span; other variables in the equation add little to the multiple correlation of .396.

Distractibility is a close second, giving a multiple correlation of .367.

It will be seen that, in the senior kindergarten results, the Attention Span and Persistence ratings are consistently the best single predictor of most test performances and are the best leading component of any composite of ratings. However, at times, the prediction based on Attention Span is improved by including the Adaptability rating.

The reason why Distractibility runs Attention Span a close second as a predictor of test performance is that Attention Span and Distractibility are closely related; in effect, one is the converse of the other. The correlation, in the senior kindergarten group is, in fact -.642, which means that they have a very high common factor.

What these findings confirm is that the temperament ratings are good predictors of children's test performance. As noted above, the ratings describe characteristics of children, or patterns of response, which are closely related to being an effective learner. It is clear that the child who has a good attention span and is persistent on tasks, (or is not distractible) is in the position to learn effectively, particularly if he is also adaptable to new situations and tasks.

It should be emphasized that this is true for the school situation, and for teachers' constructs of the child. It does not follow that "temperamental" variables as such are linked with good test performance. It will be seen later that there are quite different relationships with parents' ratings of temperament.

34.6.0 Parents' Ratings of the Temperament Scales, and Children's Tests

The parents' ratings of children's temperament were cross-tabulated with the children's test scores.

In the junior kindergarten group, the majority of associations, 57 were non-significant. Thirteen correlations were significant, at .05 to .002 level, mean .024.

They were: Activity with grand total of tests: Approach-withdrawal with expressive language; Adaptability with gross motor skills and fine motor skills; Threshold of Response with gross motor skills; Intensity of Response with reading; Quality of Mood with reading and math.; Distractibility with gross motor skills, fine motor skills and grand total of tests; Persistence with receptive language and expressive language.

There is no obvious pattern in these relationships. The temperament scales with most correlations are Adaptability, Distractibility and Persistence. It may be recalled that these were the scales with highest predictive relationships with children's test scores when teachers' ratings were used. However, there is no consistent pattern even with these scales. Relationships appear as often as not to be with the motor skills, rather than with the language or academic kinds of performance.

In the senior kindergarten group there were slightly fewer non-significant associations (51) and a greater number of significant associations (20). The probability of these associations ranged from .0006 to .02, mean .012.

They were: Adaptability with receptive language, spelling, math., fine motor skills and grand total of tests; Threshold of Response with fine motor skills; Intensity of Response with expressive language and gross motor skills; Quality of Mood with gross motor skills. Distractibility with reading, math, and grand total of tests; Persistence with receptive language, expressive language, spelling, reading, math., gross motor skills, fine motor skills, and grand total of tests.

The pattern of relationships is much clearer in the senior kindergarten group,though scattered.

Adaptability,Distractibility and, in particular, Persistence/ Attention Span are the temperament scales which are most highly and consistently related to test performance. These are variables which cluster closely together on a factor analysis of the interrelationships of teachers' ratings of children's temperament. They are also the variables, in teachers' ratings, which are the best predictors of children's test performance.

This consistency between relationships and effects of the three temperament scales in both the parents' and teachers' ratings for the senior kindergarten group confirms that there is a valid and persistent pattern, even though it is weaker and more diffuse in the parents' ratings. Persistence of a trait or pattern across different fields of rating, or across different test instruments, is a strong argument for the reality of the trait or pattern.

Once again, the factor appears to be one of psychological integration and control (adaptability/persistence) which would contribute to an efficient learning style.

CHAPTER 35 – TEACHERS' RATINGS OF CHILDREN'S LANGUAGE PERFORMANCE AND THEIR RELATIONSHIPS WITH CHILDREN'S TEST PERFORMANCE

The teachers' ratings of children's language performance levels of acquisition had, in general, significant associations with children's test performance.

The items in this "language scale" (discussed in a previous chapter) are listed again, with brief descriptions.

#1 Speech is clear
#2 Uses simple grammatically correct sentences (minimum 4 words)
#3 Uses compound sentences with conjunctions
#4 Uses complex sentences with subordinate constructions
#5 Uses phrases (e.g. ball with the red stripe)
#6 Uses more complex phrases (e.g. boy on a bicycle with a hat on)
#7 Uses appropriate question forms
#8 Uses copula verbs such as "is".
#9 Uses regular plurals for nouns
#10 Uses many irregular plurals for nouns
#11 Uses appropriate tense (past, present, future)
#12 Uses passive tense
#13 Uses correct grammatical agreement (e.g. they, are)

The ratings and children's test performance were cross-tabulated. In the junior kindergarten group the associations of language ratings with the tests varied from those items which had a large number of significant associations to those with few associations. The range was from ratings which correlated with 9 of the 11 test scores (Items #1, 2, 9) to those items which correlated with none (#5). The mean number of tests with which a rating correlated significantly was 4.7. The actual distribution is as follows: Language rating items #1, 3, 9, 13 had each 9 tests significantly correlated with them.
Items #2, 8, 10 correlated significantly with 6, 5, 4 tests respectively. Items #6 and 7 correlated with 3 tests; items #11 and 12 correlated

with 2 tests; item #4 correlated with no test, and #5 with none.

In the senior kindergarten group there was a consistently large number of highly significant associations of language ratings with tests. The number of significant test associations for each rating varied from 10 to 6. The mean number of significant associations between rating and tests was 9.2. In other words, the number of significant associations between language ratings and tests in the senior kindergarten was double that for junior kindergarten.

The actual distribution was:

Item 7 - 11 significant test correlations; items 5, 8, 11, 13 - 10 significant test correlations; items #2, 4, 6, 12 - 9 significant test correlations; items #9 and 10 - 8 significant test correlations; and item 3 - 7 significant test correlations.

These results suggest that teachers' ratings of children's language performance, even such short and simply worded items as used here, are an excellent predictor of children's test performance at the senior kindergarten level. Selected ratings offer a good prediction of test performance at the junior kindergarten stage. One reason for this outcome is that the language rating items represent a range of language behaviour which covers systematically a considerable span of development in the acquisition of language. The "scaling" of the language performance items confirms the validity of the procession of acquisition analyzed and described by Crystal, et al., on the basis of their summary of much previous study of language acquisition in young children. The test scores also have a considerable component of language acquisition and attainment in them, as can be seen by inspection of the tests and verified by the factor-analysis of the interrelationships of test scores, for both junior and senior kindergarten groups. These results underline the importance of language in the attainment and progress of the child at the kindergarten level.

It may be noted that the fewer and lower associations between language ratings and tests in the junior kindergarten group may be due to the difficulty (1) of the language acquisition items (e.g. use of passive) and (2) of some tests.

Tests such as pre-reading, pre-writing and spelling were extremely difficult, i.e. had an extremely positively skewed distribution of scores, with many children scoring at low levels.

Junior Kindergarten

35.1.0 Significant Correlations with Language Ratings

(Probabilities in brackets)

Language Rating #1

Total language (.001); Math (.005); Gross motor (.02); Fine motor (.007); Total motor (.01); Receptive language (.003); Expressive language (.006); Naming colours (.01); Grand total of tests (.05).

Language Rating #2

Total language (.04); Math (.04); Gross motor (.02); Fine motor (.05); Receptive language (.02); Expressive language (.03).

Language Rating #3

Total language (.05); Math (.05); Gross motor (.0007); Fine motor (.04); Total motor (.006); Receptive language (.02); Expressive language (.02); Naming colours (.04); Grand total (.01)

Language Rating #4

Spelling (.03)

Language Rating #5

No significant correlations

Language Rating #6

Spelling (.01); Receptive language (.01); Grand total (.0003)

Language Rating #7

Math (.02); Receptive language (.001); Grand total (.02)

Language Rating #8

Total language (.02); Math (.03); Receptive language (.006); Expressive language (.03); Grand total (.005)

Language Rating #9

Total language (.01); Spelling (.03); Math (.03); Gross motor (.02); Total motor (.04); Receptive language (.02); Expressive language (.02); Naming colours (.03); Grand total (.008)

Language Rating #10

Total language (.04); Spelling (.02); Reading (.03); Expressive language (.01)

Language Rating #12

Math.(02); Total motor (.05)

Language Rating #13

Total language (.02); Spelling (.008); Reading (.007); Math (.01); Fine motor (.01); Receptive language (.02); Expressive language (.03); Grand total (.03)

Senior Kindergarten

35.1.1 Significant Correlations with Language Ratings

(Probabilities in brackets)

Language Rating #1

Total language (.003); Spelling (.02); Reading (.02); Math (.003); Fine motor (.04); Total motor (.05); Receptive language (.008); Expressive language (.0003); Colour naming (.01); Grand total (.03)

Language Rating #2

Total language (.0001); Spelling (.01); Reading (.03); Math (.01); Gross motor (.05); Fine motor (.01); Receptive language (.006); Expressive language (.0001); Naming colours (.007)

Language Rating #3

Total language (.0001); Spelling (.003); Reading (.006); Math (.004); Receptive language (.02); Expressive language (.0003); Grand total (.04)

Language Rating #4

Total language (.0001); Spelling (.007); Reading (.02); Math (.01); ine motor (.05); Receptive language (.005); Expressive language (.001); Colour naming (.03); Grand total (.001)

Language Rating #5

Total language (.0001); Spelling (.02); Reading (.01); Math (.008); Fine motor (.002); Total motor (.007); Receptive language (.05); Expressive language (.0002); Naming colours (.004); Grand total (.05).

Language Rating #6

Total language (.0001); Spelling (.05); Reading (.007); Math (.003); Fine motor (.02); Total motor (.03); Receptive language (.04); Expressive language (.0001); Grand total (.0001).

Language Rating #7

Total language (.004); Spelling (.0002); Reading (.05); Math (.005); Gross motor (.03); Fine motor (.004); Total motor (.04); Receptive language (.05); Expressive language (.01); Colour naming (.02); Grand total (.03).

Language Rating #8

Total language (.001); Spelling (.003); Reading (.0007); Math (.03); Gross motor (.03); Total motor (.02); Receptive language (.05) Expressive language (.03); Colour naming (.03); Grand total (.003).

Language Rating #9

Total language (.03); Reading (.04); Math (.02); Gross motor (.03); Receptive language (.001); Expressive language (.04); Colour naming Grand total (.0004).

Language Rating #10

Total language (.003); Spelling (.04); Reading (.04); Math(.03) Fine motor (.05); Receptive language (.008); Expressive language (.002); Grand total (.002).

Language Rating #11

Total language (.0002); Spelling (.002); Reading (.004); Math. (.01); Fine motor (.002); Total motor (.04); Receptive language (.001); Expressive language (.0005); Colour naming (.001); Grand total (.03).

Language Rating #12

Total language (.040); Spelling (.001); Reading (.05); Math (.004); Fine motor (.02); Total motor (.005); Receptive language (.003); Expressive language (.001); Grand total (.007)

Language Rating #13

Total language (.0001); Spelling (.0001); Reading (.005); Reading (.005); Math (.02); Fine motor (.01); Total motor (.04); Receptive language (.02); Expressive language (.0001); Naming colour (.001)

CHAPTER 36 – MULTIPLE REGRESSION ANALYSIS OF THE RELATIONSHIP BETWEEN TESTS AND TEACHERS' ESTIMATE OF ABILITY

Multiple regression analyses were carried out, in which the teachers' estimate of children's ability (in upper, middle and lower thirds) was used as the dependent variable and the tests were used as predictors. The purpose of this analysis is to find (1) whether the multiple correlation based on the weighted scores of a number of tests is better than the best simple correlations of one test with the teachers' estimate; (2) what proportion of additional variance is accounted for by adding a particular test, and (3) what are the weights to be given to each test in the battery to achieve the highest multiple correlation with the criterion.

36.1.0 The multiple regression equation based on 94 senior kindergarten children (those who had completed all tests) made use of the full battery of tests. By so doing, it raised the correlation with the criterion (teachers' estimate) from the best simple correlation (with the language test) to .67. Beginning with the language test, which had a simple correlation with the criterion of .637, the equation added successively: math, expressive language, shape drawing, receptive language, spelling and reading, colour knowledge and fine-motor skills.

The improvement in amount of variance accounted for by the multiple correlation was 30 percent.

36.1.1 In the junior kindergarten group, a regression equation was computed on all variables, on the 29 children who had completed all tests. The improvement in multiple correlation was from a simple correlation of .55 between fine motor skills and the teachers' estimate, used as the first variable, up to a multiple correlation of .78 on the whole battery. This is an excellent kind of prediction.

The improvement in the amount of variance accounted for in prediction (square of the multiple correlation) was also 30 percent.

The regression equations were re-worked, using a larger number of children who had completed a smaller number of tests.

36.2.0 In the senior kindergarten group, the battery: language test, expressive language, math and shape drawing were chosen as the tests completed by most children.

The regression equation raised the multiple correlation between the test battery and the criterion from a simple correlation of .41 between the first variable chosen (language test) and criterion up to a multiple correlation of .64; an improvement of 24 percent in the amount of variance (multiple correlation squared) accounted for in prediction. The beta weights for the equation were Language test -.04 and Expressive language -.19, Math -.41, Shape drawing -.14, i.e. math is clearly the best predictor.

36.2.1 A similar analysis for the junior kindergarten group, using 58 children who had completed the same tests, resulted in raising the predictive value from .54, the value of the simple correlation between the language test and criterion, to a multiple correlation of .71. This was an improvement of 21 percent in the variance accounted for by prediction. (Multiple correlation squared) The beta weights for the equation were Language test -.17 plus Expressive language .-19 Math 0.32 plus Shape drawing -.20, i.e. Math is the most important predictor.

In general, it can be concluded that the correlations between any individual test and the teachers' estimate of ability were moderate, and that the value attained by a multiple correlation based on from 11 to 4 tests succeeded in raising predictive value by significant amounts, to a multiple correlation of .61 to .71 i.e. moderate to good degree of prediction.

The weights for the individual tests tended either to be fairly equal and low or to assign considerably more weight to the math tests.

These results mean that little is gained by differential weighting of the tests, as compared with simply adding standard scores, i.e. scores with equal weights for all tests.

It is clear that certain tests, such as the math test have such relatively high correlations with the criterion that little is gained by using a large battery as compared with simply using the math test alone.

In this connection, it is clear that a small group of tests selected for high correlation with the criterion, such as math and to a lesser degree language, predicts the criterion better than a much longer battery.

It is concluded therefore, that the optimum correlation between the tests used to assess developmental levels or abilities in children in this sample and the teachers' estimate of ability taken at the same time or at most within two months, will be a moderate to high value of about .6 to .7 (i.e. the tests account for some 36 to 50 percent of the true score variance).

This would suggest that in predicting children's progress in kindergarten it would be most useful to use a small number of selected tests plus the teacher's estimate of ability (suitably standardized) rather than the tests alone.

36.3.0 Predictive Equations for the Test Performance of Children Using Teachers' Ratings and Parental Status

Multiple regression equations were computed to obtain the best predictions from a set of predictors comprising: teachers' ratings of children's temperament, teachers' ratings of language levels, father's and mother's socio-economic status and educational level.

The test performances were grouped to form meaningful and reliable clusters, such as total language performance (expressive and receptive and vocabulary), spelling/copying and reading attainments and a composite of mathematics and performance on drawing geometric shapes, and the grand total of test scores (unweighted). The rationale for adding the math and geometric drawing scores was that the geometric drawing test appears to be isolated from the others and its main factor loading apart from general ability appears to be a visual-perceptual/ spatial loading which it shares with math.

The outcomes of the analyses were surprising, since they were so simple. Very few items were required to produce the best prediction for each composite. To begin with, rigorous limits were set in the computer program to select the best predictor; only variables with clearly significant F ratios and adding a value of .10 to the multiple correlation were to be selected.

The results at this stage were as follows:

In the junior kindergarten group, total language was best predicted by: language rating #13 (uses correct agreement) plus Temperament 7 (Persistence). This gave a multiple correlation of .717.

Spelling/Reading was best predicted by Language rating #6 (uses complex phrase structures) alone, with a correlation of .601.

Math and Geomtric Shape Drawing was best predicted by Language rating #7 (Uses appropriate form for questions). This gave a correlation of .532.

The grand total was best predicted by Language rating #6 and #1 (Uses complex phrases; and speech is clear) This gave a multiple correlation of .691.

For the senior kindergarten group, results were as follows:

Total language was best predicted by: Language rating #2 (Uses grammatically correct sentence) and Temperament Rating 8 (Distractibility). The multiple correlation with criterion was .712 . Spelling/reading was best predicted by: Language rating #3. (Uses compound sentences) and Temperament #8 (Distractibility). The multiple correlation was .516. Math and geometric drawing was best predicted by Language rating #4. (Uses complex sentences) and Temperament #2 (Adaptability). The multiple correlation was .604.

Grand total of tests was best predicted by: Language rating #4 (above); Temperament #8 (Distractibility) and Mother's Educational Level. The multiple correlation was .679.

All the multiple correlation coefficients are respectable within the range expected for the relationship between a teacher's rating and objective test performance. Two of the coefficients, for the most stable and significant composites - total language and total test are in the region of .70, which is a very high correlation.

In most instances, the multiple regression equation, though limited to only two or three variables, significantly improved prediction over the best single correlation with a particular test.

Examination of the contribution made by variables not yet included in the equation showed that, at times, Temperament #8 could have been exchanged for Temperament #2, and that Mother's socio-economic status or educational level had a borderline contribution to make to the equation. Otherwise, the selected predictors accounted for most of the significant variance of the criterion.

The analysis was repeated, lowering the limits of F ratio to allow the computer program to select variables which were just significant

(F ratios of 4 and over) and contributing .03 or more to the multiple correlation coefficient.

The outcomes were essentially the same as with the more rigorous conditions. For the junior kindergarten group, the predictors selected were the same and the multiple correlations remained the same.

There was slightly more change in the senior kindergarten group.

Total language was now best predicted by: Language ratings #2 (Uses grammatically correct sentences), #4 (Uses complex sentences) and #9 (Uses regular plurals) plus Distractibility with Mother's Educational Level not included in the equation but having a residual borderline significant contribution. The multiple correlation rose slightly to .736.

Spelling/Reading was best predicted by: Language rating #3 (Uses compound sentences) and Temperament #8 (Distractibility). The multiple correlation remained at .516.

Math and Geometric drawing was best predicted by: Language rating #4 (Uses complex sentences); Temperament rating #8 (Distractibility) and an additional variable, Mother's Educational Level. The multiple correlation rose slightly to .643.

Grand total of tests was best predicted by: Language rating #4 (Uses complex sentences), Temperament #8 (Distractibility) and Mother's Educational Level. The multiple correlation rose slightly to .712.

It was noticeable that Temperament rating #2 might have been substituted for #8 in two of the equations, and that Mother's Socio-economic Status ran a close second to Educational Level.

No significant variance was left after the selected variable had entered the equation.

This means that the selected variables, i.e. the language and temperament variables, plus the mother's educational level, accounted for all the significant relationships with the criterion, and also "absorbed", as it were, the significant relationships between the other predictors and criterion.

This means that some very simple and direct teacher ratings of language level and of "temperament" (i.e. the child's interaction with teacher and attitude to task) predicted various kinds of test performance to an unexpectedly high degree. It is evident that much the same effect could be obtained, more reliably, by using all or part of the whole language rating scale, and the whole temperament scale.

It is of interest that mother's educational level is the most important factor among the parental social-status/educational variables. The prediction equation, for grand total of tests, contains three factors which each make a unique contribution from a different area: language, temperament and child's background.

The results, in particular the high "concurrent validity" correlations between teachers' estimates and children's test performance, are of direct interest for the province's present interest in early identification of children.

37.1.0 Temperament Scales (Teachers' Ratings)

Intercorrelations between the teachers' ratings of children on the "temperament scales" were factors analyzed by means of the principal components method, followed by varimax rotation to attempt to establish a clearer picture of the pattern found.

For the junior kindergarten group, the first principal factor was essentially a large general factor with high positive loadings on all but two temperament traits. Highest loadings were on: Approach-Withdrawal, Adaptability, Mood and Attention Span. Percentage of variance accounted for by this factor was 71.9 percent, which confirms that it is a large, important and general factor. In effect, it states that the different temperament scales have a great deal in common, and represent some general factor of "temperament" or personal characteristics as perceived by the teacher which are best described by the child's tendency to be positive in approach, to be adaptable, not to have moods and have good attention span or persistence on task, i.e. Adaptability-Persistence. This has some similarities to the "general emotional factor" found by Burt (1917) in ratings of personal characteristics and behaviour many years ago, and similar factors identified by Cattell as related to general adjustment and effectiveness.

The second principle factor was much smaller, accounting for 28.1 percent of variance. It grouped Activity Level, Distractibility, and the reverse of Attention Span, together with Intensity of Response. This factor seems to describe the characteristics of the child which are related to high activity level, distractibility and poor attention span (to some degree representing the impulsive child, and reminding one of some of the aspects of the rather vaguely defined syndrome of "hyperactivity").

The varimax rotated factors once again present a large general factor best represented by Intensity/Approach-Withdrawal, Activity Level, Adaptability, i.e., a dynamic Activity/Adaptability factor. The second rotated factor describes Adaptability, Mood and Attention Span, as contrasted with Distractibility and Activity. This brings out the fact that the positive characteristics of the child are perceived as lack of moodiness and high attention span as contrasted with a high activity level and distractibility in approaching school tasks.

Two significant principal component factors appeared in the senior kindergarten group. The first, which accounted for 71.9 percent of the variance, was an important general factor best represented by Approach-Withdrawal, Adaptability, Attention Span and Intensity of Reaction. Once again it is clear that the temperament scales do not form specific groupings but are best described as contributing to a large, important, general "temperament" or personality factor in which the child is perceived as effective in making approaches to people and tasks, is adaptable to new situations and tasks, has good attention span and is not too intense in reaction.

The second principal factor accounted for 28.1 percent of variance, so is much less important. Succeeding factors accounted for much lower levels of variance and can be discounted.

The second factor grouped together Activity, Distractibility and to some extent Intensity of Reaction and Attention Span (reversed). This is, once again, the impulsivity/distractibility factor noted in the junior kindergarten factors.

The rotated Kaiser normalized factors confirmed the same pattern.

These results are interesting since they are very similar for the two age groups.

They indicate that the temperament scales used for rating children are by no means as independent of one another as would be suggested by the work of Chess et al. in devising these scales and using them to describe pre-school children.

Essentially, the scales measure a general factor of temperamental/emotional behaviour, best described as (1) effectiveness in the kinds of relationships and adjustments involved in approach to new situations as contrasted with withdrawal, i.e., a healthy degree of outgoing, effective behaviour, (2) adaptability to new tasks and situations,(3) a good attention span or lack of distractibility, and (4) a fairly intense reaction or involvement.

The impression is of dynamic but controlled response.

Additional to this, the scales clearly delineate, for both age groups, a pattern of behaviour described by undue activity, distractibility, intensity of responses and poor attention span - the active, distractible and impulsive child or the converse.

Clearly both of these factors describe the "good student" or the child with an effective base in behaviour or interpersonal relationships for effective learning.

This accounts for the fact that the temperament scales correlate so highly with children's test performance, a completely independent and objective measure. The importance of measures of attention/distractibility and adaptability are underlined, as contrasted with the negative weightings for over-activity.

Good predictions could be obtained by summing the selected temperament scales which best represent the two temperament or personality factors. The multiple regression equations indicate which specific scales are the best predictors for children's test performance.

37.2.0 Factor Analysis of the Tests

The main test battery was analyzed by means of principal factor analysis; principal factors were rotated by the varimax method to approach a simple structure which would allow of more effective interpretation.

For the junior kindergarten children, a major general factor ran through all tests. It was best represented by the math , spelling and geometric drawing tests, but also had high loadings on vocabulary and receptive/expressive language. Lowest loadings were on naming colours and the fine motor test.

This first principal factor can be interpreted as a general ability/ verbal ability factor.

The second principal components factor had high loadings on the academic tests (spelling and reading) as contrasted with math and fine motor skills.

The pattern of signs on the third principal components factor suggested that tests could be classified into motor skills (plus, strangely enough, vocabulary); math and drawing geometric shapes; language, especially expressive; and the academic group, spelling and reading.

The rotated varimax factors did not increase the distinctiveness of grouping a great deal. The first factor appeared to be a verbal/ academic factor with high loadings on spelling and reading; the second was a language factor (receptive and expressive language and vocabulary) though there was an overlap with gross-motor skills; the third factor grouped together math and drawing geometric shapes.

The third factor may be a "reasoning" factor, since math involved conceptual reasoning in part, and the drawing geometric figures is a well known test of developmental cognitive functioning. It is also of interest that the math and geometric drawing tests were associated, as the geometric drawing test is a test of spatial/visual/perceptual ability; some of the older research suggested that there is a strong spatial component in early mathematical concepts and operations.

The first principal factor accounted for 40.7 percent of the total variance; the second accounted for 17.9 percent and the third for 9.9 percent. The next two factors accounted for 8.2 and 7.5 percent of variance, which tapered off thereafter. These results suggest that only the first two factors, possibly the third, are important.

In the senior kindergarten group, the first principal factor is a large general factor covering most of the tests, and appears to represent verbal ability (highest loadings on vocabulary, receptive and expressive language). The second factor has high loadings on math, reading and spelling, i.e. appears to represent academic attainments; the third factor links fine and gross motor skills and drawing of geometric shapes (plus overlap on to receptive language and spelling). Except for the overlap with language, the third factor appears to represent a spatial/motor factor.

The rotated varimax factors do not make the picture much clearer. They suggest the existence of a strong verbal factor (high loadings on vocabulary and expressive language). The second factor links math and spelling, in an "academic" factor; and the third factor links motor skills, math and drawing of geometric shapes - a much more obvious spatial factor.

The first principal factor accounted for 63 percent of variance, the second for 26 percent and the third for 10.6 percent. Clearly, the first factor has much the greatest contribution, and at most only the first and second principal factors are likely to be important.

In summary, the factors are general rather than specific; they represent mainly performances in general ability, verbal and educational attainment. It is therefore appropriate to sum together test scores, with or without weighting, to obtain a general average (grand total) which more or less represents an important general/language/academic attainment factor, which should be closely related to school progress.

SUMMARY

The study was based on a sample of 6 boards of education representing the geographical and social variation in Ontario; within these boards, random samples were taken of schools, and within schools random samples were taken of children.

Junior kindergarten and senior kindergarten groups were studied. Where junior kindergarten groups were studied, the corresponding kindergarten classes were also included in the sample.

Information was gathered from various sources - parents, principals of schools, teachers, and observations by the research team.

A variety of instruments and techniques were used: a mailed questionnaire to parents, followed by structured interviews in the home; questionnaires to principals and teachers on a wide variety of topics including school organization, teachers' planning and practices in the classroom, educational objectives, organization of class, and observation of children. Teachers were asked to rate children on self-help and social skills, on temperament scales and language In addition, brief tests of language, pre-reading, pre-writing, math and motor skills were administered.

Statistical analyses of the data provided a considerable variety of interesting data on family background of the study, parental characteristics, social-economic status and educational level, parental interest in their children's education, ways in which parents stimulated and helped the children at home, and parents' contact with school.

The study of teacher characteristics included: educational objectives, classroom practices, forms of organization in the classroom, children's use of activities and time devoted to these, equipment and disciplinary techniques.

The total test score discriminated well between children at both junior kindergarten and kindergarten level, producing a wide dispersal of scores. Tests and rating results on children provided both a criterion of abilities/progress and predictor of future progress; it was demonstrated that teachers' rating of temperament and language had a high correlation with test performance. Test performance in turn had a high correlation with teachers' general ratings of children's ability and progress.

Social measures such as social-economic status and parents' educational level had a low and restricted relationship with children's test performance at the junior kindergarten level; at the kindergarten level, these social variables had significant but low relationships with the test performance of children. The father's socio-economic status was in general the best predictor, although the mother's educational level appeared to be the best predictor in some circumstances.

The parents' interest in the child's progress, as measured by the parents who stimulated and educated the children in the home, were related to social status variables. Factors such as membership or use of a library, spending time with the child, buying magazines especially for children positively related to social variables. Amount of television viewing by the child in the evening was negatively related to social variables. However, these particular measures were highly specific and did not relate at all to measures of parental interest in school or on the whole to the child's performance on a test.

RECOMMENDATIONS

Further detailed study of a number of Francophone/Anglophone areas is recommended.

Because of the interesting trends observed, the study should be repeated in its major outline with a much larger sample.

A longer period of time should be allotted in a study of this nature to allow for adequate preparation of instruments, field work and analyses.

To gain access to schools in the Fall, boards should be initially contacted in the early Spring. It is imperative, therefore, that for similar studies the time parameter allowsfor this intial Spring contact.

DIFFERENCES BETWEEN SOCIAL/FAMILIAL FACTORS IN FRANCOPHONE AND ANGLOPHONE GROUPS

The North Bay sample was also used to contrast specific important social/familial factors in Francophone and Anglophone groups, both of which had children in the sample, in both junior and senior kindergarten.

There were no significant differences on items such as persons sharing the household; type of dwelling; number of rooms; whether child has his own room; and social/economic status of neighbourhood.

There was no significant difference in father's education but a significant difference (correlation, probability .03) in education of mother, with the Francophone group having in general superior levels of education.

The Franchophone families had moved more (between 2 to 5 times) in the last 5 years (a highly significant difference, probability .002 to .004 on chi square and correlation analysis).

The Francophone families bought significantly fewer newspapers (significance) at .02 to .005 level).

There was significantly less TV viewing in the evening among Francophone families (significance .009 to .03 level)

Comparisons between Francophone and Anglophone Samples (Test Results)

Test results enabling comparison of Francophone and Anglophone junior kindergarten and kindergarten groups were available for the North Bay sample.

At the junior kindergarten level, there were significant differences in favour of the Anglophone group, on: Spelling, Reading, Math and Grand total of tests. Differences were significant at the .0 to .003 levels, on the test, confirmed by F ratio test.

At the senior kindergarten level, there was a significant difference in favour of the Anglophone group only on Reading (significance .004 on the test).

The test material and instructions had been translated and adapted for Francophone groups. Nevertheless, there is a striking difference between the groups at the junior kindergarten level in pre-reading and pre-writing skills and math. On language tests and tests involving general ability, the two groups were comparable, so that the difference is not due to lower intelligence or to poorer verbal ability in the Francophone group.

The differences may be due to differences in approach and philosophy in the schools, to differences in the home, or unforseen differences in the test material.

Significantly fewer Francophone families wanted a second language taught in the schools (correlation coefficient significant at .015 level).

Significantly more Francophone families estimated their child as being in the middle third in ability (66 percent) whereas among the Anglophone families 59.1 percent estimated that the child was in the top third of ability. The difference was significant at the .005 to .006 level. This suggests that Francophone families are either more realistic or more cautious in their estimates of their children's ability.

As noted elsewhere, the two groups of children were essentially similar in language and vocabulary abilities, so that there is no evidence of real intellectual differences in the groups.

There was a near significant difference between Francophone and Anglophone families in the number of places of cultural and educational interest visited more than once. The Francophone group showed a strong trend to visit more places (7 to 13) and the significance was .06, just short of acceptability.

In summary, there is clear evidence of differences in social and familial factors between Francophone and Anglophone groups in this sample. Since they cannot be accounted for in terms of gross social status and neighbourhood factors they may well be due to factors such as mother's educational level (higher in the Franchophone group) and the subtler cultural factors.

The lower newspaper readership may be due to cultural factors, or to the fact that less is available for Francophone readers.

CORRELATIONS BETWEEN TV VIEWING BY CHILDREN IN THE MORNING, AFTERNOON AND EVENING

A multiple regression analysis indicates that there is no significant association between the amount of TV viewing in the afternoon and the evening; or the joint effects of afternoon and morning viewing and evening viewing. There is a barely significant relationship between morning viewing of TV and evening viewing, when evening is being predicted from morning; and conversely. (F ratio of 3.67).

This analysis suggests that the kind of TV viewing behaviour (in terms of time spent) occurring in the morning has some relationship, though slight to moderate only, with TV viewing behaviour in the evening. The implication is that the same children are involved to some degree. However, the overlap is not marked and barely significant.

A total of 182 children watch TV in the evening: 39 a lot (2 to 3 hours), 90 a moderate amount (½ to 1 hour) and 53 a little (up to half an hour). The majority, therefore, watch only moderate to small amounts of TV.

Of the 39 who watch a lot in the evening, 20 (51.3 percent) watch only a little and 13 (33.3 percent) watch ½ to 1 hour of TV in the afternoon. Similarly, of the 39, 18 (46.2 percent) watch only a little and

13 (33.3 percent) watch ½ to 1 hour in the morning. From this, it can be reasonably concluded that, of those children who watch the most TV in the evening (2 or more hours) the majority watch only a little and a third watch a moderate amount in the morning or afternoon. It is possible, of course, that some of those who watch TV a little or moderately in the morning also watch the same amount in the afternoon, but if they are attending a morning or afternoon session of school, this is unlikely.

The "high level" TV watchers in the evening therefore seem to be a distinct group.

Of the 90 children who watched TV in moderate amounts in the evening (½ to 1 hour), the majority (64.4 percent) watched only a little and 26 (28.9 percent) watched a moderate amount (½ to 1 hour) in the morning.

On the other hand, a majority of the 90 (43 or 47.8 percent)watched TV in moderate amounts and 34 or 37.8 percent watched TV a little in the afternoon.

Of the 53 children who watched TV only a little in the evening, the majority (27 or 49.1 percent) watch TV in moderate amounts (½ to 1 hour) and just over a third (21 or 38.2 percent) watched only a little in the afternoon.

Of the 53, the majority (32 of 58.2 percent) watched only a little and 18 (32.7 percent) a moderate amount in the morning.

The group which watched TV only a little in the evening therefore watched only moderate or little amounts in the afternoon and morning.

The general conclusion, therefore, is that children who watch a great deal of TV are a particular group, who watch for little or moderate amounts in the morning or afternoon. However, a third of this extreme group do watch between ½ and 1 hour in the morning or afternoon.

By contrast, those who watch only a little evening TV watch only moderate or little amounts in the afternoon or morning.

However, a significant proportion of those who watch TV a lot or in moderate amounts in the evening are those who have a high total of TV viewing throughout the whole day.

In effect, the groups tend to be those children who watch a significant amount of TV (the "evening viewers") and those who watch little.

SOCIO-ECONOMIC/STATUS, PARENTAL EDUCATION AND OTHER PARENTAL CHARACTERISTICS

Cross-tabulations were carried out between parental socio-economic status (occupational level), educational level, number of rooms in dwelling, and other variables relating to parental characteristics on Form 1 (mailed questionnaire data).

A more exhaustive regression analysis will be carried out in which socio-economic status, educational level of parents, and other indices of parental interest in education are used to predict and help explain important parental characteristics including the child's development and progress and parental relationships with school.

Maternal Socio-economic Status

This factor is significantly related to the following variables: Parents buy a magazine for the child (chi square, probability .0001) i.e. a very significant relationship; The family belongs to a public library (chi square beyond .001); The parents believe that the neighbourhood they live in affects the kind of school their child goes to. This factor had a significant but low probability (chi square .04).

It is of interest that there is no significant relationship between maternal socio-economic status and buying books for the child; it would appear that most families claim to buy books for children.

Neither is there a relationship with newspaper readership; most families claim to buy and read a daily or weekly newspaper.

There is, unexpectedly, no significant relationship with the amount of TV viewing by the child, though there is a suggestion of such a relationship with the amount of viewing by the child in the evening i.e. when adult programs predominate and the amount of viewing may be directly related to the amount of TV content unsuitable for the child.

What is unexpected is the lack of relationship with number of rooms in the family dwelling. It must be pointed out that, though an analysis of relationship based on chi square is not significant, there _is_ a significant correlation (r .288, significant at .004 level of probability).

Also unexpected is the lack of relationship with estimates of the parental ranking of the child(top, middle or bottom thirds) in anticipated ability, and with degree of vocational ambition for the child.

Father's Socio-Economic Status

This may well be more closely related to some characteristics of family and child, since the father's occupational level is up-to-date and may be improving. If improvement is taking place, this argues that the father has characteristics such as industry, talent, skill and readiness to improve his education, etc. which are likely to be correlated with interest in his children's education.

Father's socio-economic status is significantly linked with:- Number of rooms in dwelling;chi square probability less than .01; (This was not significant for mother's socio-economic level, but a significant relationship would be expected (because of better earnings, etc.) There are significant relationships with: Buying a magazine especially for the child; The family belonging to a public library; Whether the father reads to or looks at books with the child. (This last item was not significantly related to socio-economic status).

There was also a significant relationship, though at a fairly low level (chi square .04 level of probability) with estimates of the parents' ranking of child's ability. That is, the higher the socio-economic status of the father, the greater the anticipation of a higher ability level of child relative to other children.

There was also a nearly significant relationship with parental vocational ambition for the child (chi square, probability .06).

Mother's Educational Level

Educational level is to some extent built into socio-economic status as measured by the Blishen scale use in this study. Each occupation was rated in terms of its wage-level, educational requirements and perceived status. However, parental educational level at the time of the study is likely to be an important factor in its own right. Level of parental education is, in fact, likely to be more directly related than is socio-economic status to parental interest in the child's development and education and culture in general,and specific parental beliefs and practices which would support the child's intellectual development.

Maternal educational level is significantly related to:- Buying a magazine especially for the child (chi square probability .01): The family belonging to a public library (chi square, probability .002), a highly significant relationship; Whether mother reads books to or talks with the child (chi square probability .02). There is also a relationship with TV viewing by the child, as follows:- The amount of evening viewing (chi square, probability .02) and the kind of programs most watched (chi square, probability .02).

It is also of interest that there is a near-significant relationship with number of rooms in dwelling (chi square, probability .06; with correlation coefficients between maternal educational level and number of rooms also showing significant relationships)

There is, however, no relationshp with parental estimates of the child's ability, or vocational ambitions for the child.

Father's Educational Level

There was a highly significant relationship with buying magazines especially for the child, (chi square .0008) and low but significant relationships with: Family belongs to library (chi square, probability .03); Father reads stories to the child (chi square probability .03); Parental vocational ambition for the child (chi square, probability .03).

In general, it looks as if relationships between father's educational level and important family/educational variables are lower than between these and mother's educational level. It seems likely that father's socio-economic level affects some outcomes more significantly and directly because it is a "present time" factor, and brings to bear factors such as family economic status, father's ambition, etc. Mother's socio-economic status is less up-to-date and often more an indication of past occupational levels, and so less directly related to some present variables. However, father's original educational level may well be less important than what he has since done with it i.e. in creating his present socio-economic status. By contrast, mother's educational level continues to remain a direct index of the knowledge, culture and interest in education which she can bring to bear in the upbringing of her children and the direction of the family's cultural and educational pursuits.

Pre-school Placement and Pre-school Activities

One cluster of variables concerned with preschool placement and activities is particularly interesting.

Mother's socio-economic status is significantly related (probability .01) with whether or not the child had a preschool placement (e.g. day care, nursery school, etc.)

Mother's educational level has only a borderline relationship with whether or not a child had a preschool placement such as nursery school or day care(probability .05 to .10)

However, mother's educational level is significantly related to whether a child had organized activities (play group or organized physical activities as contrasted with none) in the preschool period. (Probability .02 to .01)

The father's socio-economic status had a borderzone relationship with whether or not the child had a preschool placement (probability .10 to .05) but a fairly strong one with the kind of preschool placement (day-care, nursery, etc.) (probability .01) though not with the kind of organized activities (play-group versus physical).

There was a strong to moderate relationship between father's educational level and whether or not the child had a preschool placement, (probability .01) and with the kind of preschool placement. (Proability .05)

There was a strong relationship between father's educational level and whether or not the child had organized activities in the preschool period.

It must be recalled that these relationships are the more important since they are found in a minority of the total sample of parents.

Analysis of the pattern for day care versus nursery school suggests that parents of lower socio-economic status tend to have children in day care and parents of higher socio-economic status tend to choose nursery schools. The kind of neighbourhood lived in,availability of day-care services in urban and "inner city" areas,and level of fee required would bear on these choices as well as whether mother is working or itis a single-parent family.

It is of interest to find the above evidence of direct relationships between the socio-economic status and educational level of parents, and their provision of stimulation for children, through organized activities, in the preschool period, when such additional experiences are likely to provide an important basis for intellectual/social development.

Interestingly, there is no relationship between mother's socio-economic status or educational level and the number and kind of educational or cultural experiences/trips provided for the child (circus, art-gallery, concert , train ride, etc.) whereas there is a significant difference between father's educational level (not socio-economic status) and number and kind of such experiences/trips.

Number of Rooms in Dwelling

This factor did not have significant relationships with any others, with the exception of: whether the child had a preschool placement or not (borderline significance .05 to .10) and the kind of preschool placement (probability .05). The relationships here are likely to be due to or mediated by socio-economic status i.e. the fact that families of high socio-economic status are likely to be more affluent and to have better housing with more space, or the need of some families to provide preschool experience such as day-care for a child almost as a necessity, if the dwelling is restricted (e.g. high-rise) and particularly if this is associated with lower economic level and a working mother.

Neighbourhood

Status of neighbourhood, as assessed by the research team on Form II, interview with family, had no very marked relationships, except with:- finding time to sit quietly with child (probability .003); a near significant relationship with using this quiet time to listen or read to the child; and a significant relationship with whether the father finds time to spend with the child.

Other Relationships

It is of interest that there is no relationship between parental socio-economic or educational levels and educational events such as meeting the teacher or principal when attending school for the first time, or a wish to meet them. Clearly, such events are more controlled by school than parent, and the majority of parents, at this point in their child's school career, express a fairly high level of involvement or interest in school, regardless of socio-economic educational level.

Summary

The cluster of relationships observed: socio-economic status and/or educational level and library membership, buying special magazines for child, amount of TV viewing by child in evening, father or mother reading to child and (possibly) parental ranking of child's ability level and ambition for child - all make sense. They confirm previous findings (e.g. Plowden Report, based on children covering the entire primary and junior age range) that socio-economic status (reflecting parents' educational level and perception of educational and vocational interests and ambitions) is related to more subtle cultural and educational factors which are more direct measures of parental (i) attitude to education and (ii) direct interest in children's development and education. The importance of the factors of library membership, and of buying special magazines for the child (as contrasted with the conventionally "expected" books and toys found in most families) suggests that there are effective ways in which parental education and interest in education are transmitted to children.

Parents' reading to a child is a direct measure of their concern for his/her welfare and personal development, and directly related to the situation of respect and desire for literacy.

The connections between these factors suggest that they should form significant predictors of the child's educational progress.

In the following pages are tables of the teachers' expectations of the children in junior kindergarten and senior kindergarten. The interpretations of these tables can be found on pages 259 - 262 of the text.

Code to Symbols

S.H.	Self-help skills
G.M.	Gross motor skills
E.H.	Eye-hand co-ordination
P.R.	Pre-reading abilities
P.W.	Pre-writing abilities
R.L.	Receptive language
E.L.	Expressive language
N.	Number/math concepts
G.C.	General knowledge and cognitive abilities
S.P.	Social-Personal skills

JUNIOR KINDERGARTEN

		Beginning of school year			End of school year		
		Mean	Cumulative %	Relative %	Mean	Cumulative %	Relative %
SH	Can undo and do up big buttons	2.0	92.3	78.6	1.15	92.3	85.7
N	Can count to 5	2.09	90.9	71.4	1.15	100	14.3
GC	Can name 4 colors	2.0	90.0	57.1	1.2	100	14.3
SH	Can go to the bathroom at appropriate times	1.6	84.6	28.6	1.23	92.3	7.1
SH	Looks after bathroom needs completely	1.7	84.6	35.7	1.15	100	14.3
SP	Can select own materials for play activity	1.8	84.6	50.0	1.07	100	7.1
EL	Speaks in 3 word sentences	1.8	83.3	42.9	1.3	92.3	14.3
RL	Can identify parts of body named (5)	2.17	75.0	57.1	1.2	92.3	7.1
GM	Can kick a ball forward	1.9	72.7	28.6	1.42	83.3	7.1
SH	Can put on own shoes	2.0	66.7	28.6	1.3	92.3	14.3
RL	Can listen to a story for 5 minutes	2.3	66.7	50.0	1.4	92.3	21.4
N	Concept of 3 (can give 3 blocks)	2.17	66.7	42.9	1.23	100	21.4
GM	Can hop on one foot	2.2	66.7	50.0	1.25	100	21.4
N	Can give age in years	2.3	66.7	28.6	1.3	100	28.6
PR	Can identify six letters by name	2.38	62.5	35.7	1.7	90.9	42.9
N	Can show correct fingers for questions about age	2.4	61.5	35.7	1.2	76.9	21.4
SP	Can share toys and materials within a group	2.3	60.0	35.7	1.7	84.6	35.7
EC	Can hold crayon or pencil in "writing" grip	2.25	58.3	35.7	1.67	91.7	42.9

		Beginning of school year			End of school year		
		Mean	Cumulative %	Relative %	Mean	Cumulative %	Relative %
SH	Can dress in outdoor clothes	2.4	58.3	50.0	1.39	100	35.7
PR	Can follow with attention while teacher reads story	2.3	58.3	42.9	1.5	91.7	28.6
N	Can count to 10	2.5	54.5	42.9	1.38	92.3	21.4
GM	Can run 10 foot line, turn run back without stopping	2.27	54.5	28.6	1.75	83.3	35.7
GM	Can catch large ball	2.36	54.5	35.7	1.3	91.7	14.3
SP	Can co-operate with 2 others	2.4	50.0	28.6	1.23	100	21.4
RL	Can identify parts of body such as elbow, knee	2.5	50.0	42.9	1.4	100	35.7
RL	Can pick the biggest, smallest in size of objects	2.5	50.0	35.7	1.6	92.3	42.9
PR	Points appropriately to pictures in book to follow story	2.4	46.2	35.7	1.6	92.3	42.9
EC	Can use scissors	2.5	46.2	42.9	1.31	92.3	14.3
EC	Can follow details of pictures with eye and pointing hand	2.4	44.4	21.4	1.8	80.0	28.6
GC	Can match 4 colors, red, green, yellow, blue	2.6	41.7	35.7	1.3	100	35.7
SP	Can sustain interest in self-chosen activity 10 min.	2.6	40.0	28.6	1.5	92.3	28.6
GC	Can draw a person - 4 details	2.5	40.0	21.4	1.3	100	28.6
PR	Can match familiar pictures and words	2.6	40.0	14.3	1.7	87.5	28.6
SH	Can zipper up coat	2.5	38.5	28.6	1.3	92.3	21.4
GM	Can walk 10', 2" x 4" board on flat side	2.62	37.5	21.4	1.9	75.0	35.7
EL	Speaks in well formed 4 or more word sentences	2.54	36.4	21.4	1.77	92.3	57.1

	Beginning of school year			End of school year		
	Mean	Cumulative %	Relative %	Mean	Cumulative %	Relative %
N Concept of 5 - 6	2.64	36.4	28.3	1.67	91.7	42.9
SP Can take turns within a group	2.6	36.4	28.6	1.5	100	50.0
SP Can co-operate with 3 - 4 others	2.5	33.3	14.3	1.9	83.3	50.0
GM Can catch a bounced ball	2.67	33.3	21.4	1.67	83.3	28.6
EL Can use variety of descriptive words or phrases	2.5	33.3	7.1	2.12	62.5	21.4
N Can give apartment or house number	2.67	33.3	14.3	2.1	70.0	35.7
PR Can identify own first name in print	2.6	33.3	21.4	1.3	92.3	14.3
RL Can listen to a story for 10 minutes	2.7	30.0	21.4	1.8	83.3	35.7
RL Can follow 2 directions	2.6	30.0	14.3	1.5	100	50.0
SP Can wait for use of a preferred toy - 5 minutes	2.7	28.6	14.3	1.55	90.9	28.6
PW Can copy/trace over letters	#2.7	25.0	7.1	2.3	60.0	35.7
RL Can recognize penny, nickel, dime when named	#2.8	25.0	7.1	2.5	44.4	28.6
PR Can give rhymes for familiar words	#2.7	25	7.1	2.4	44.4	21.4
N Concept of 9 - 10	2.8	25	14.3	2.36	54.5	35.7
N Can match orally named numbers with printed numbers up to 5	2.8	22.2	14.3	2.0	61.5	21.4
EL Uses regular past (e.g. kicked, have kicked)	2.8	20.0	7.1	2.1	71.4	28.6
GC Draw a person 10 details	2.8	20.0	7.1	2.14	71.4	28.6
EC Can cut approximate curve with scissors	2.8	16.7	14.3	1.76	92.3	28.6
PR Can identify most of alphabet by name	2.8	14.3	7.1	2.6	36.4	28.6

		Beginning of school year			End of school year		
		Mean	Cumulative %	Relative	Mean	Cumulative %	Relative
SP	Can wait 10 minutes for toy	2.8	14.3	7.1	2.0	77.8	35.7
EL	Uses compound sentences (and, then, but) between sentences	2.88	12.5	7.1	2.08	66.7	35.7
GM	Can catch small ball	2.87	12.5	7.1	2.09	72.7	42.9
N	Can count to 20	2.9	11.1	7.1	2.36	63.6	50.0
N	Concept of "one more"	2.9	11.1	7.1	2.0	75.0	42.9
GC	Can name 8 colors - e.g. purple, brown	3.0	*(71.4)	*(71.4)	1.5	100	21.4
EC	Can color within lines (one shape)	3.0	*(71.4)	*(71.4)	1.9	100	71.4
PW	Can print own first name recognizably	3.0	*(64.3)	*(64.3)	2.3	69.2	64.3
GC	Draw a person 6 details	3.0	*(64.3)	*(64.3)	2.4	58.3	50
RL	Can listen to a story for 15 min.	3.0	*(57.1)	*(57.1)	2.3	60.0	35.7
EC	Can copy - print along a straight line	3.0	*(50)	*(50)	2.2	75.0	42.9
RL	Can follow 3 directions in sequence	3.0	*(50)	*(50)	2.09	81.8	57.1
EL	Uses correct plurals	3.0	*(50)	*(50)	2.0	62.5	14.3
N	Can tell precise date of birth (day and month)	3.0	*(50)	*(50)	2.36	45.5	21.4
EL	Can tell a familiar story in reasonably correct language	2.8	*(64.3)	*(64.3)	2.08	69.2	42.9
PW	Can copy 6 letters	3.0	*(42.9)	*(42.9)	2.3	66.7	57.1
EL	Uses complex sentences (because, before, if)	3.0	*(42.9)	*(42.9)	2.18	63.6	35.7
N	Can match orally named numbers with printed numbers up to 10	3.0	*(42.9)	*(42.9)	2.2	70.0	42.9

		Beginning of school year			End of school year		
		Mean	Cumulative %	Relative	Mean	Cumulative %	Relative
GM	Can throw a ball 10' in right direction	2.64	(36.4)	(28.6)	1.7	90.9	28.6
EL	Strings 3 - 6 sentences together in statement	3.0	*(35.7)	*(35.7)	2.43	42.9	14.3
EL	Uses correct irregular plurals e.g. mouse/mice	3.0	*(35.6)	*(35.6)	2.17	66.7	21.4
GC	Knows seasons of the year	2.3	*(33.3)	*(33.3)	2.3	62.5	28.6
PW	Can approximate writing patterns (loops, etc.)	3.0	*(28.6)	*(28.6)	#1.7	75.0	7.1
GC	Can distinguish right/left on own hands	#3.0	*(28.6)	*(28.6)	2.4	50	21.4
PR	Can pick out word when given spoken version	3.0	*(28.6)	*(28.6)	2.4	60	14.3
PR	Can match appropriate letters to pictures(initial c = cat)	#3.0	*(21.4)	*(21.4)	#2.6	33.3	7.1
EL	Uses irregular past (broke, have broken)	#3.0	*(21.4)	*(21.4)	2.5	33.3	7.1
N	Can match line exactly with ruler	#3.0	*(21.4)	*(21.4)	#1.3	100	7.1
PR	Can identify final sounds in a set of familiar words	#3.0	*(14.3)	*(14.3)	#2.67	33.3	7.1
GC	Knows date	#3.0	*(14.3)	*(14.3)	2.6	*20.0	21.4
PR	Can identify particular initial letters/sounds in a set of familiar words	#3.0	*(14.3)	*(14.3)	2.5	33.3	7.1
GC	Knows days of the week	#3.0	*(14.3)	*(14.3)	2.8	25.0	14.3
PR	Can read sentences in simple child's book	#3.0	*(7.1)	*(7.1)	#2.0	100	7.1
N	Can print numbers 1 - 10	#3.0	*(7.1)	*(7.1)	2.7	28.6	14.3
N	Can count in 2's to 10 or over	#3.0	*(7.1)	*(7.1)	#3.0	*(21.4)	*(21.4)
PR	Can identify small number of words by sight	#3.0	*(7.1)	*(7.1)	2.2	60.0	14.3

		Beginning of school year			End of school year		
		Mean	Cumulative %	Relative	Mean	Cumulative %	Relative
PR	Can recognize own sentences when printed by teacher	# 3.0	*(7.1)	*(7.1)	# 2.0	100	7.1
N	Can tell time from clock with numbers - hours, half hours	# 3.0	*(7.1)	*(7.1)	# 3.0	*(21.4)	*(21.4)
N	Can give combinations within 3 e.g. 3 and 2	# 3.0	*(7.1)	*(7.1)	# 3.0	*(21.4)	*(21.4)
PW	Can write a variety of simple sentences	# 3.0	*(7.1)	*(7.1)	# 3.0	*(7.1)	*(7.1)
PR	Can read books (Pre-primer)	# 3.0	*(7.1)	*(7.1)	# 2.0	*(7.1)	*(7.1)
PW	Can write 2 - 4 letter words (copy)	# 3.0	*(7.1)	*(7.1)	2.67	*(35.7)	*(35.7)
N	Can print numbers 10 - 20	# 3.0	*(7.1)	*(7.1)	# 2.3	*(33.3)	*(33.3)
PW	Can attempt to write a simple sentence	# 3.0	*(7.1)	*(7.1)	# 3.0	*(14.3)	*(14.3)
PR	Can read a small set of words	# 3.0	*(7.1)	*(7.1)	# 2.0	75.0	14.3
PW	Can spontaneously write (print) number of words	# 3.0	*(7.1)	*(7.1)	# 3.0	*(14.3)	*(14.3)
GC	Knows months of the year	# 3.0	*(7.1)	*(7.1)	# 3.0	*(21.4)	*(21.4)

* - represents upper 1/3 of class only

# - more than 10 unable to complete task

SENIOR KINDERGARTEN

		Beginning of school year			End of school year		
		Mean	Cumulative %	Relative %	Mean	Cumulative %	Relative %
SH	Can go to the bathroom at appropriate times	1.30	97.6	27.9	1.09	100	9.3
N	Can count to 5	1.50	97.4	46.5	1.10	97.5	7.0
SH	Looks after bathroom needs completely	1.20	95.1	18.6	1.02	100	2.3
SH	Can undo and do up big buttons	1.78	95.0	62.8	1.14	97.6	9.3
EC	Can use scissors	2.00	92.3	76.7	1.25	92.5	9.3
RL	Can identify parts of body named (5)	1.74	92.3	53.5	1.12	97.5	7.0
N	Can count to 10	1.70	92.3	53.5	1.10	100	9.3
SH	Can dress in outdoor clothes	1.90	92.5	69.8	1.07	100	7.0
EL	Speaks in 3 word sentences	1.60	91.9	39.5	1.17	97.4	11.6
GM	Can catch large ball	1.95	87.5	62.8	1.20	97.5	14.0
N	Can give age in years	1.71	86.8	39.5	1.05	100.0	4.7
PR	Can follow with attention while teacher reads story	2.00	85.4	67.4	1.19	97.6	14.0
RL	Can listen to a story for 5 min.	1.72	85.0	39.5	1.05	97.5	2.3
GC	Can match 4 colors, red, green yellow, blue	1.75	85.0	41.9	1.10	100	9.3
N	Concept of 3 (can give 3 blocks)	1.87	84.2	48.8	1.20	90.0	4.7
N	Can show correct fingers for questions about age	1.89	84.2	51.2	1.3	95.0	18.6
GC	Can draw a person - 4 details	1.95	83.8	53.5	1.18	97.4	11.6
EC	Can hold crayon or pencil in "writing" grip	3.12	82.9	74.4	1.24	97.6	18.6
GC	Can name 4 colors	1.70	82.5	34.9	1.05	100	4.7
SP	Can select own materials for play activity	1.81	81.6	39.5	1.02	100	2.3

		Beginning of school year			End of school year		
		Mean	Cumulative %	Relative %	Mean	Cumulative %	Relative %
GM	Can kick a ball forward	2.03	80.6	53.5	1.41	92.3	23.3
EC	Points appropriately to pictures in book to follow story	2.13	80.0	67.4	1.71	100	16.3
N	Concept of 5 - 6	2.10	78.9	67.4	1.20	94.9	11.6
SH	Can put on own shoes	1.80	78.0	37.2	1.12	97.6	7.0
GM	Can hop on one foot	2.13	74.4	55.8	1.20	100.0	18.6
GM	Can walk 10', 2" x 4" board flat side	2.13	74.4	55.8	1.33	95	20.9
RL	Can follow 2 directions	2.00	73.7	46.5	1.2	97.4	14.0
RL	Can pick the biggest, smallest size of objects	2.00	72.5	46.5	1.12	97.5	7.0
GM	Can run 10 foot line, turn run back without stopping	2.00	72.2	44.2	1.34	92.1	16.3
GRL	Can identify parts of body such as elbow, knee	2.10	71.1	46.5	1.15	97.4	9.3
SP	Can take turns within a group	2.27	70.0	46.5	1.27	97.0	16.3
SH	Can zipper up coat	2.10	70.7	58.1	1.2	97.6	16.3
SP	Can co-operate with 2 others	2.18	69.2	51.2	1.25	100	23.3
PR	Can identify own first name in print	2.20	68.3	55.8	1.0	100	2.3
EL	Speaks in well formed 4 or more word sentences	2.24	67.6	51.2	1.33	100	30.2
SP	Can sustain interest in self-chose activity 10 minutes	2.20	65.8	46.5	1.3	100	32.6
GC	Can name 8 colors - e.g. purple, brown	2.20	64.9	44.2	1.23	100	20.9
SP	Can share toys and materials within a group	2.20	63.9	41.9	1.35	95.0	23.3
EC	Can follow details of pictures with eye and pointing hand	2.20	62.2	41.9	1.37	100	34.9

		Beginning of school year			End of school year		
		Mean	Cumulative %	Relative %	Mean	Cumulative %	Relative %
SP	Can co-operate with 3 - 4	2.32	58.8	39.5	1.56	92.3	37.2
GM	Can catch a bounced ball	2.39	56.6	46.5	1.40	97.5	32.6
SP	Can wait for use of a preferred toy - 5 minutes	2.34	56.3	34.9	1.36	97.0	23.3
N	Can match orally named numbers with printed numbers up to 5	2.40	55.9	39.5	1.2	94.9	14.9
PW	Can copy 6 letters	2.40	55.9	44.2	1.5	92.5	32.6
PW	Can copy/trace over letters	2.40	55.6	46.5	1.4	95.1	32.6
RL	Can listen to a story for 10 minutes	2.34	55.3	39.5	1.42	92.5	25.6
EC	Can draw straight line horizontally	2.43	51.4	39.5	1.43	95.1	32.6
PW	Can print own first name recognizably	2.40	51.4	39.5	1.2	97.6	18.6
EC	Can color within lines (one chape)	2.46	51.3	44.2	1.54	97.6	46.5
GC	Can draw a person 6 details	2.50	48.5	34.9	1.46	100	39.5
N	Concept of "one more"	2.40	48.5	27.9	1.4	94.6	30.2
N	Can give apartment or house number	2.40	45.7	25.6	1.46	94.6	30.2
EL	Can tell a familiar story in reasonably correct language	2.50	45.5	30.2	1.6	100	58.1
EC	Can cut approximate curve with scissors	2.56	43.9	41.9	1.49	95.1	37.2
PW	Can write 2-4 letter words (copy)	2.50	41.7	23.3	1.68	82.9	27.9
GM	Can throw a ball 10' in right direction	2.55	39.5	30.2	1.6	95.0	46.5
SP	Can wait for use of preferred toy 10 minutes	2.50	38.7	23.3	1.5	91.9	30.2
EL	Can use variety of descriptive words or phrases	2.50	37.0	16.3	2.0	81.1	53.5

		Beginning of school year			End of school year		
		Mean	Cumulative %	Relative %	Mean	Cumulative %	Relative %
EL	Uses correct plurals	2.60	36.7	23.3	1.9	82.4	44.2
RL	Can listen to a story for 15 minutes	2.60	35.7	20.9	1.79	86.1	41.9
RL	Can follow 3 directions in sequence	2.60	34.3	25.6	1.5	95.0	41.9
N	Can count to 20	2.66	34.2	30.2	1.4	94.9	27.9
GC	Can draw a person - 10 details	2.54	33.3	11.6	1.8	83.3	39.5
N	Concept of 9 - 10	2.80	32.4	27.9	1.4	95.0	34.9
GM	Can catch small ball	2.68	31.6	27.9	1.58	95.0	44.2
PR	Can match familiar pictures and words	2.65	30.8	16.3	1.94	71.7	32.6
PR	Can identify six letters by name	2.66	30.6	23.3	1.5	92.3	32.6
N	Can match orally named numbers with printed numbers up to 10	2.70	25.9	14.0	1.2	87.2	23.3
EL	Uses compound sentences (and, then,but) between sentences	2.70	25.0	16.3	1.95	89.5	65.1
DR	Can give rhymes for familiar word	2.72	24.1	14.0	1.77	94.9	60.5
EL	Uses regular past (e.g. kicked, have kicked)	2.76	24.1	16.3	2.09	75.8	46.5
GC	Knows seasons of the year	2.68	24.0	9.3	1.80	88.6	46.5
N	Can count in 2's to 10 or over	2.80	22.2	4.7	2.4	50.0	30.2
GC	Can distinguish right/left on own hands	2.70	20.8	9.3	1.9	85.0	55.8
EL	Uses complex sentences (because before, if)	2.70	20.0	9.3	2.08	80.0	55.8
N	Can tell precise date of birthday (day and month)	2.78	19.2	9.3	2.2	61.5	41.9
PW	Can approximate writing patterns (loops, etc.)	2.70	19.0	7.0	1.8	83.3	37.2

		Beginning of school year			End of school year		
		Mean	Cumulative %	Relative %	Mean	Cumulative %	Relative %
PR	Can identify most of alphabet by name	2.82	18.5	11.6	1.89	89.2	58.1
PR	Can identify particular initial letters/sounds in a set of familiar words	2.73	15.8	2.3	2.0	85	65.1
EL	Uses correct irregular plurals e.g. mouse/mice	2.80	15.4	7.0	2.28	62.9	44.2
EC	Can copy - print along a straight line	2.82	14.8	7.0	2.03	72.2	39.5
EL	Strings 3 - 6 sentences together in statement	2.80	11.5	7.0	2.27	62.2	44.2
EL	Uses irregular past (broke, have broken)	2.80	10.5	2.3	2.28	63.3	37.2
AC	Knows date	# 2.90	9.1	2.3	1.99	81.3	44.2
AC	Knows months of the year	# 2.90	9.1	2.3	2.06	70.0	32.6
PR	Can match appropriate letters to pictures (initial c = cat)	# 2.90	9.1	2.3	2.53	40.6	25.6
N	Can give combinations within 5 e.g. 3 and 2	# 2.90	9.1	2.3	2.57	39.3	23.3
N	Can match line exactly with rule end to end	# 2.90	8.3	2.3	2.5	45.5	18.6
N	Can print numbers 1 - 10	2.91	8.3	4.7	1.6	94.7	46.5
GC	Knows days of the week	2.90	7.4	4.7	1.67	94.6	48.8
RL	Can recognize penny, nickel, dime when named	2.90	6.7	4.7	1.86	89.5	58.1
PR	Can pick out word when given spoken version	# 3.00	*(25.6)	*(25.6)	2.37	51.9	25.6
PR	Can identify final sounds in a set of familiar words	# 3.00	*(25.6)	*(25.6)	2.39	51.5	32.6
N	Can print numbers 10 - 20	# 3.00	*(23.3)	*(23.3)	2.3	59.4	37.2
PR	Can read sentences in simple child book	# 2.60	*(20.0)	*(2.3)	# 2.6	26.3	7.0

	Beginning of school year			End of school year		
	Mean	Cumulative %	Relative %	Mean	Cumulative %	Relative
PW Can spontaneously write (print) a number of words	# 3.00	* (16.3)	* (16.3)	2.58	33.3	14.0
PR Can read a small set of words	# 2.70	14.3	2.3	2.6	25	9.3
PR Can recognize own sentences printed by teacher	# 2.70	14.3	2.3	2.4	43.3	20.9
N Can tell time from clock with numbers - hours, half hours	# 3.00	* 11.6	*(11.6)	2.5	48.0	25.6
PW Can attempt to write a simple sentence	# 3.00	*(11.6)	*(11.6)	2.75	20.0	7.0
PW Can write a variety of simple sentences	# 3.00	*(9.3)	*(9.3)	#2.6	22.2	2.3
PR Can identify small number of words by sight	# 2.80	*(7.7)	*(2.3)	2.3	50.0	30.2
PR Can read books (Pre-primer)	# 3.00	*(7.0)	*(7.0)	#2.7	14.3	2.3

# more than 20 are unable to accomplish task

* represents upper third of class only

DIAGONAL FACTOR ANALYSES OF CORRELATIONS BETWEEN TESTS AND TEACHERS' ESTIMATES

	F1	F2	F3	F4	F5
Math	1.000	000	000	000	000
Total Language	.507	.8620	000	000	000
Spelling	.539	.2456	.8057	000	000
Reading	.690	.0919	.3742	.0841	.6070
Motor Total	.494	.3277	.2387	.7620	000
Teachers' Estimates	.634	.2606	.2536	.0597	.0334

F1 = Math
F2 = Language/Motor
F3 = Spelling/Reading
F4 = Motor (specific)
F5 = Reading (specific)

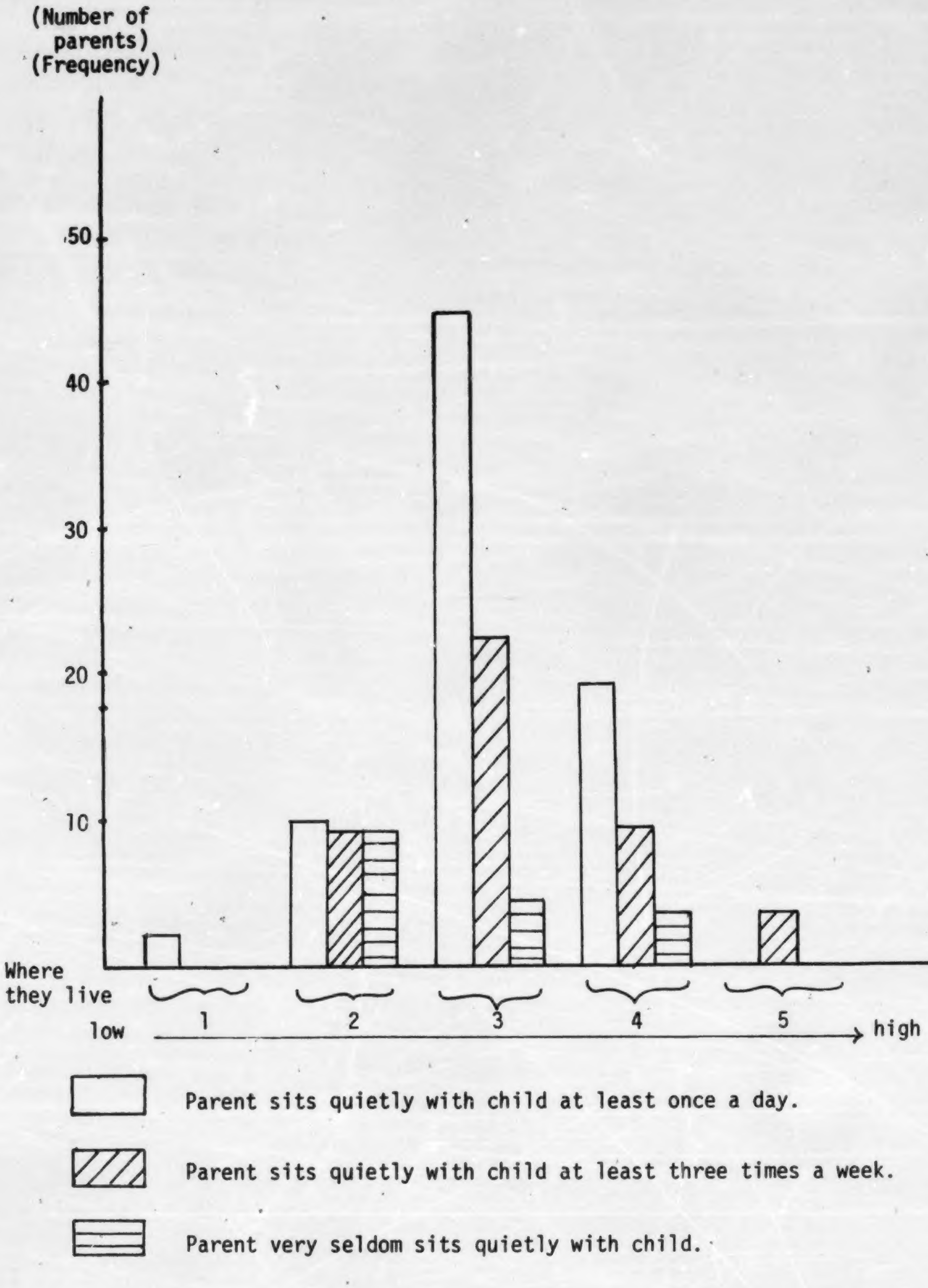
ALTERNATIVE ANALYSES

	F1	F2	F3	F4	F5
Teachers' Estimates	1.000	000	000	000	000
Total Language	.546	.8378	000	000	000
Spelling	.610	.1814	.1562	.7554	000
Reading	.590	.1277	.3898	.3337	.0820
Math	.634	.1922	.7491	000	000
Motor Total	.505	.2733	.1615	.1961	.7783

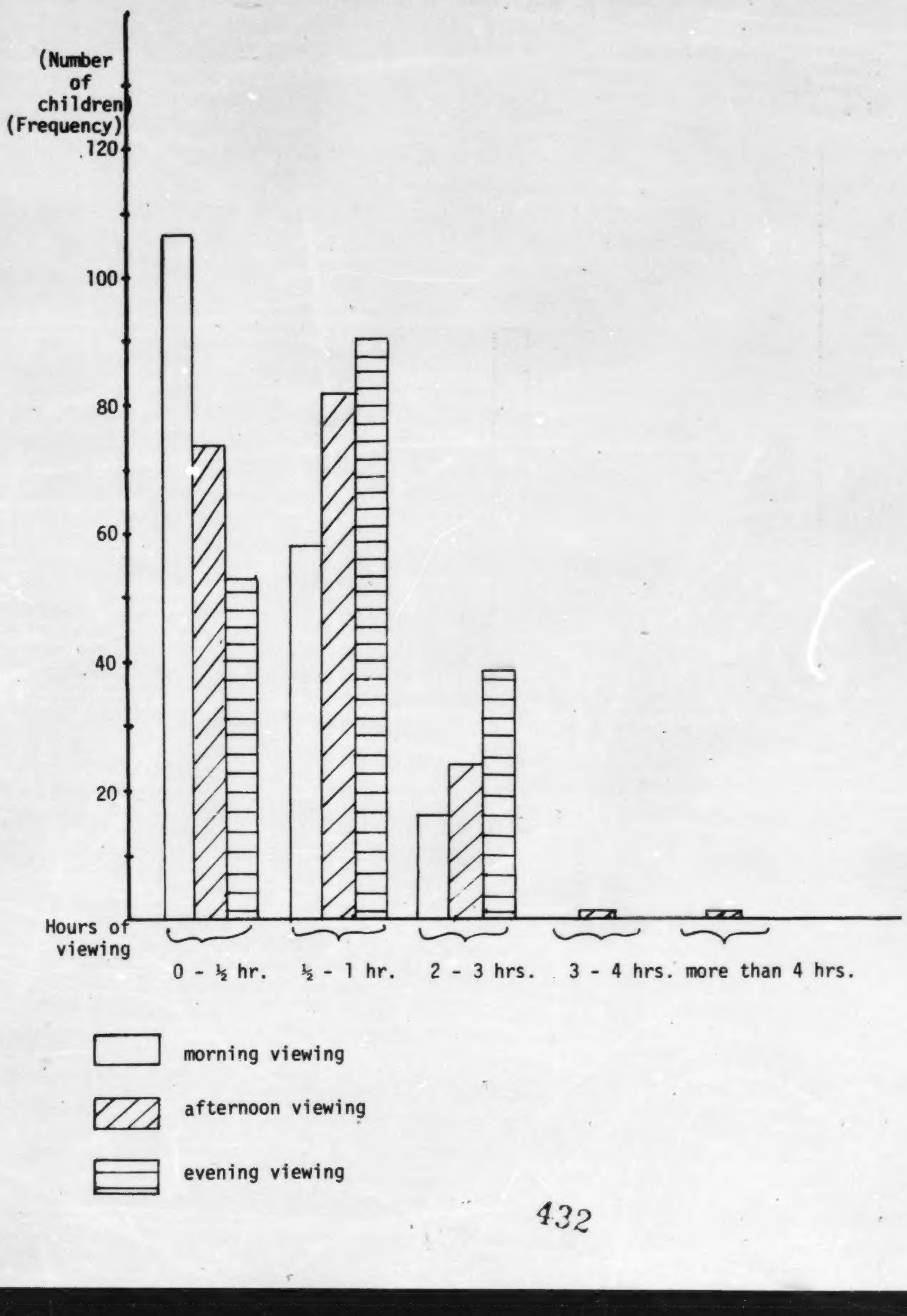
F1 = General Educational Achievement

F2 = Language/Motor
F3 = Math
F4 = Spelling/Reading
F5 = Motor (specific)

THE AMOUNT OF TIME PARENTS SPEND WITH THEIR CHILD COMPARED TO THE QUALITY OF THEIR HOUSING



THE AMOUNT OF TIME CHILDREN SPEND WATCHING TELEVISION: MORNING, AFTERNOON AND EVENING



REFERENCES

Berstein, B. (1960), "Language and social class", British Journal of Sociology. 11,271.

Blishen, B.R. (1964), "A socio-economic index for occupations in Canada". Canadian Review of Sociology and Anthropology. 41,41-53.

Burt, C.L. (1917), Mental and Scholastic Tests. London.

Coleman, J.S. et al. (1966), Equality of Educational Opportunity. U.S. Office of Education, Washington, D.C.

Crystal, D., Fletcher, P. and Garman, M. (1976), Grammatical Analysis of Language Disability. (Studies in Language Disability and Remediation 1.) Edward Arnold, London.

Donaldson, M.C. and Wales, R.J. (1970), "On the Acquisition of some relational terms" in Hayes, J.R. (ed.), Cognition and the Development of Language. Wiley, N.Y.

Douglas, J.W.B. (1964), The Home and School. MacGibbon and Kee, London.

Gittins, C.E. (1968), Primary Education in Wales. Her Majesty's Stationery Office, London.

Hall, E.M. and Dennis, L.A. (1968), Living and Learning. Ontario Department of Education, Toronto.

Hedges, H.G. (1972), Using Volunteers in Schools. The Ontario Institute for Studies in Education, Toronto, Ontario.

Ilg, F.L. and Ames, L.B. (1965), School Readiness; Behaviour Tests Used at the Gesell Institute. Harper and Row, N.Y.

Lee, L., Koenigsknecht, R. and Mulhern, S.T. (1975), Interactive Language Developmental Teaching. (The Clinical Presentation of Grammatical Structures). Northwestern University Press, Evanston, Ill.

Morgan, G.A.V. (1978), An Investigation of the Characteristics, Distribution and Program Needs of Children with Severe Communication Disorders. Ministry of Education, Ontario.

(1979), A Psycho-Acoustic Approach to Reading Readiness. Ministry of Education, Ontario.

Nash, C. (1976), The Learning Environment. Methuen Publications, Toronto.

Plowden, B. (1967), Children and Their Primary Schools. Her Majesty's Stationery Office, London.

Rosner, J. (1975), Helping Children Overcome Learning Difficulties. Walker and Company, New York.

Rutter, M. and Martin, J.A.M. (eds.) (1972), The Child with Delayed Speech. Clinics in Developmental Medicine #43, Spastics International Medical Publications, Neinemann, London.

Rutter, M., Tizard, J. and Whitmore, K. (1970), "The Isle of Wight Study", Education, Health and Behaviour. Longmans, London.

Thomas, A. and Chess, S. (1977), Temperament and Development. Brunner Mazel, N.Y.

TEST REFERENCES

Carolina Scales, Lillie, David L. (1975), Early Childhood Education: An Individualized Approach to Developmental Instruction. Science Research Associates Incorporation, (I.B.M.) Toronto, Ontario.

Circus, "Educational Environment", Anderson, S.B. et al. (1974), Educational Testing Service, Princeton, N.J.

Circus, "How Words Work", Anderson, S.B. et al. (1974), Educational Testing Service, Princeton, N.J.

Cooperative Preschool Inventory, Caldwell, B.M., (1970), Addison-Wesley, Calif.

Developmental Infant Scales for Children (D.I.S.C.), Amdur, J., Ellis, M. (1977), (not yet published).

Developmental Test of Visual-Motor Integration, Beery, K., Buktenica, N. (1967), Follet Educational Corp., Chicago.

Inventory of Primary Skills, Valett, R.E. (1974), Fearon Publishers, Inc., Belmont, Calif.

Peabody Picture Vocabulary Test, Dunn, L.M. (1959), American Guidance Service, Inc.

Portage Project, Shearer, D.E. and Shearer, M.S. (1974), Cooperative Educational Service Agency, Portage, Wisc.

Wechsler Intelligence Scale for Children (Revised), Wechsler, D. (1974), Psychological Corporation, New York, N.Y.

Wide Range Achievement Test (Level 1), Bijou, S. and Jastak, J. (1946), Psychological Corporation, New York, N.Y.

Windsor Project, O'Bryan, (1978), Ministry of Education, Toronto, Ontario.